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Project Acronym:	**CLINES**
Deliverable no.:	**D7.8**
Title of the deliverable:	**Final Cluster Launching Conference and Analysis of Other Medias**

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Participants(s):	**Partners 1,2,3,4,5**
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Nature:	**R**
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Duration:	**36 months**

Abstract:

This deliverable gives a brief overview of the Final Project Conference and Innovation Workshop held in Brussels in June 2016.

Keyword list: Final Conference, speakers, city cases.

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1 Executive Summary

The deliverable D7.8 Final Cluster Launching Conference and Analysis of Other Medias is a public document delivered in the context of WP7 “Showroom and Dissemination”, Task 7.4 – Final Cluster launching conference for the CLINES project.

This deliverable provides details about the final conference of the CLINES project held on 15th June 2016 in Leuven - Belgium.

The final results achieved through the project have been presented in the form of a Joint Action Plan, as a first step to promote the economic development within the area of smart systems for Smart Cities.

2 Introduction

Although at the first project meetings the plan was that the closure event would be held in Denmark, home of the project coordinator, it was actually held in Leuven, Brussels. The change in the location was informed to the EC representatives by the project officer.

The project partners also decided to organize an innovation workshop at the same time as the closing event, in order to present our experience to a broader and international audience, so in the end, an Innovation Workshop was additionally added to the Closing Event and Final Conference.

The closure event was held in Leuven on June 15th 2016. The main objective of the conference was to present to the community the results of the CLINES project in the form of a Joint Action Plan.

A working group was created in order to take the main decisions related to the organization of the event. The group involved one representative from each partner country.

Major decisions about the organization and carrying out of the conference were taken during the Steering Committee meetings held in Germany (October 2015) and San Sebastian (April 2016). Further decisions were taken via email and Skype meetings, in the months preceding the conference.

3 Conference Venue and Date

The CLINES Innovation Workshop and Closing Conference were held in The Leuven Institute for Ireland in Europe, a monumental complex in the centre of Leuven, on June the 15th.

The auditorium was used for the closing event and the conference room for the innovation workshop. The cloister and porch were utilized for informal meetings, coffee breaks and dinner.

Photos of the Leuven Institute for Ireland in Europe

The premises of the Irish Institute used by CLINES Project

4 Programme

As established by the working group, the day programme included an innovation workshop as well as a closing event which incorporated Smart City experiences, one key lecture, and presentation of the CLINES project results.

Below the agenda of the day:

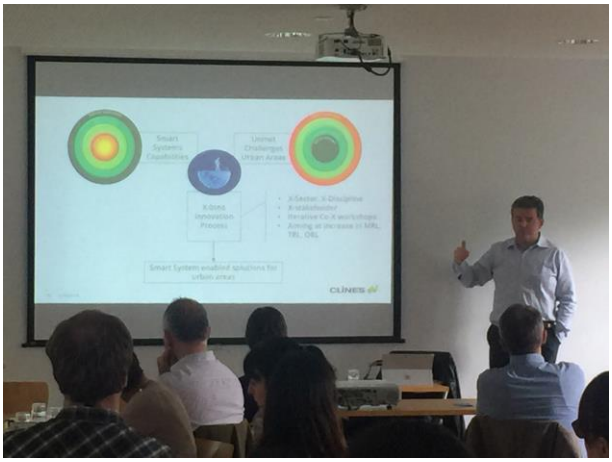
12:00 - 13:00	**Registration lunch**
13:00 - 17:00	**CLINES Innovation Workshop: Immerse your future enabled by wearable technology**
	Objective: This workshop will initiate a "Fast track to innovation", a facilitated process to speed up innovation through cross-sector, multi-disciplinary collaboration. This workshop focuses on the following key question: "How can wearable smart systems enhance the quality of life in urban areas". This project will lead to some ideas for "moon-shot projects" which will be further co-elaborated during the subsequent phases of the "Fast track to innovation"
17:00 - 17:30	**Break**
17:30 - 19:00	**CLINES Closing Event – Why Smart Cities? Why now?**
	Objective: Within the CLINES project Aalborg University, DSP Valley, GAIA and BICCnet created a joint action plan to drive the development of smart system applications for smart cities forward. This action plan will evolve into the SmartCityTech partnership. A partnership which will mobilize all international stakeholders involved in smart systems for smart cities. This workshop will justify why it's worth joining this Smart City journey through 5 short presentations • The Clines Joint Action Plan – Peter Axel Nielsen (Aalborg University) • A view on European Smart City Cases: Bilbao and Munich • From Clines to Smart City Tech – Mark De Colvenaer (DSP Valley) • Key Lecture: Smart Cities? Why Now – Prof. Dr. Pieter Ballon (VUB)
19:00 - ...	**Walking Dinner**
	Objective: Enjoy Belgian food and informally network with other Smart City

	stakeholders in the gardens of the Leuven Institute for Ireland. During the walking dinner the Moon-shot Ideas created during that afternoon were to be pitched.

4.1 The Innovation Workshop

The fifth CLINES Innovation workshop took place under the title: Immerse your future enabled by wearable technology. Same as in the others clines workshops, the idea was to speed up the innovation process by adapting cross-sector and cross-discipline collaboration. With more than 7 working groups the 40 participants worked together in order to identify new products and/or new services ready to be launched. See more information in deliverable D3.2 - Report on Innovation Workshops.

The detailed information about the CLINES Innovation Workshops is described in D3.2 - Report on innovation workshops.



The Workshop Objectives Presentation

4.2 CLINES Closing Event

The CLINES closing event was held under the title *"Why Smart Cities? Why now*?". After a short break from the innovation workshop in the reconverted Chapel of the Leuven Irish Institute the project partner Mr Peter Axel Nielsen from Aalborg University presented the CLINES Joint Action Plan, a joint action plan to drive the development of smart system applications for Smart Cities forward, a plan that summarized a large proportion of the work developed in the CLINES project. See presentation in Annex II.

Mr Peter Axel Nielsen Presentation

Similarly, as part of the closing event Mr Mark de Colvenaer from project partner DSP VALLEY presented the CLINES Internationalization Plan and the evolution of the CLINES project in the form of the SmartCityTech Project. See presentation in Annex III.

Mr Mark de Colvenaer Nielsen Presentation

4.3 The Smart City Cases

During the closing event the audience had the opportunity to get to know the first-hand experience endured by two European cities utterly concerned with the innovation and the amelioration of services for their citizens: Bilbao and Munich.

The Bilbao case was presented by Mr Josu Santacruz Cenitagoya, Smart Cities manager from Bilbao Town hall, who presented the transformation experienced by the city in the past 15 years, from being and industrial city to a service city, as well as the smart city services implemented towards a high performance city. See presentation in Annex IV.

The Munich case was presented by Ms Jessica Le Bris, Green City Project Technical Manager who delivered a speech about the brand new project implemented in the city as the potential new solution for the mobility of tomorrow: CITY eTAXI - more than just a taxi. See presentation in Annex V.

Mr Josu Santacruz Cenitagoya Presentation

Ms Jessica Le Bris Presentation

4.4 Keynote speaker

Finally, as for the keynote speaker, the choice of the project team was to invite an expert in the field of Smart City. Our choice fell on Prof. Pieter Ballon from iMinds, the Flanders' digital research & entrepreneurship hub. He showed the audience that a Smart City is not just a prefab machine designed by architects or engineers, and crammed with the latest technologies; it is a city that makes optimal use of digital technologies to respond to people's actual needs. See presentation in Annex VI.

Short profile of Pieter Ballon:

Pieter Ballon specialises in business modelling, open innovation and the mobile telecommunications industry.

Formerly, he was senior consultant and team leader at TNO. In 2006-2007, he was the coordinator of the cross issue on business models of the Wireless World Initiative (WWI), that united 5 Integrated Projects in the EU 6th Framework Programme. Currently, he is the international Secretary of the European Network of Living Labs.

Pieter Ballon holds a PhD in Communication Sciences and a MA in Modern History.

Pieter Ballon is also a recognized expert on Smart Cities.

Prof. Peter Ballon Presentation

5 Dissemination Channels

In order to reach the widest possible audience, the project partners sent the bulleting, specially designed to inform about the closing event and workshop to their contact list.

CLINES Closing Event and Innovation Workshop
June 15th 2016

The Leuven Institute for Ireland in Europe, Janseniusstraat 1, 3000 Leuven, Belgium

The Clines Project

Urban areas are melting pots for new **opportunities**. They functionas connecting points for people wholive, work, meetand enjoy their spare time at the same place.In this way, urban areas represent the getting together of the known pastand the unknown **future**. People are eager to adopt new products and services which make their life, work and spare time more enjoyable and efficient. These new features will make them more resilient to future andoften unknown events.

Smart Systems can enable these products and services. However, to apply smart system technology and to realize new solutions for citizens in urban areas cooperation between citizens, innovators, technology experts, policy makers and other stakeholders is key.

The CLINES project had as major objective to prepare for a **joint action plan** aiming at promoting economic development in the area of smart systems for smart cities. With this event the CLINES consortiumDSP Valley (BE), Aalborg University (DK), GAIA (ES), Tecnalia (ES), BICCnet (GE) aims at sharing the knowledge built through the project and hand over this experience and deliverables to the SmartCityTech partnership a follow on initiative aiming at driving the development of new applications for urban areas enabled by smart systems. Although this event is a closing event, it also initiates some new joint actions, starting with a new fast track to innovation on wearable technology.

CLINES Innovation Workshop – Immerse your future enabled by wearable technology

On **June 15th 2016**, CLINES Partner DSP Valley initiates a new Fast Track to Innovation in cooperation with its Flemish and international partners from CLINES Project. This fast track innovation aims at speeding up the innovation process by adapting cross-sector and cross-discipline collaboration. The first step is to think big by defining moonshot projects which can then be transformed into concrete and realistic projects that lead through a facilitated process to conceptual ideas, prototypes of new products and/or new services ready to be launched. Achievements in which we all believe and which are invaluable to pursue if we want to realize our moonshot ideas.

How do we start? On June 15th we embark on this innovation journey. Experts from the business areas of mobility, health, nutrition, retail, sports and other sectors are brought together in a facilitated moonshot workshop. This workshop will deliver moonshot ideas as answers to the key question: "How can wearables enhance quality of life in urban areas?"

What's next? Through a sequence of inspiration sessions, workshops, hackathons and matching events we will further elaborate on the moonshot ideas, give insight into concrete projects in specific domains and develop spider-consortia which can set up projects and make those ideas happen.

Why do you have to join this CLINES journey? It's about your future! It's highly innovative. You will cross borders and develop invaluable partnerships with motivated, likewise thinking people. We therefore would like to cordially address this invitation to people whose belief it is that active collaboration is the key for shaping our urban future and who are eager to find an answer to a key question: "How can wearable technology enhance our quality of life?".

When and Where will take place? June 15th, 2016: The Leuven Institute for Ireland in Europe, Janseniusstraat 1, 3000 Leuven, Belgium: 12-8pm. Please find a complete outline of our event program standing below.

In the event of any queries from your part concerning our event please do not hesitate to contact us.

How do I register in the CLINES journey? So, let's start with our **collaboration** and start shaping our cities of tomorrow. In order to complete your registration please go to: http://www.clines-project.eu/clines-innovation-workshop-and-closing-event.html.

AGENDA

12:00 - 13:00	Registration lunch
13:00 - 17:00	CLINES Innovation workshop Immerse your future enabled by wearable technology

Objective: This workshop will initiate a "Fast track to innovation", a facilitated process to speed up innovation through cross-sector, multi-disciplinary collaboration. This workshop focuses on the following key question: "How can wearable smart systems enhance the quality of life in urban areas". This project will lead to some ideas for "moonshot projects" which will be further co-elaborated during the subsequent phases of the "Fast track to innovation"

17:00 - 17:30	Break
17:30 - 19:00	CLINES Closing Event – Why Smart Cities? Why now?

Objective: Within the CLINES project Aalborg University, DSP Valley, GAIA and BICCnet developed a joint action plan to drive the development of smart system applications for smart cities forward. This action plan will evolve into the SmartCityTech partnership. A partnership which will mobile all international stakeholders involved in smart systems for smart cities. This workshop will justify why it's worth joining this Smart City journey through 4 short presentations

- A view on European Smart City Cases
- The Clines Joint Action Plan – Peter Axel Nielsen (Aalborg University)
- From Clines to Smart City Tech – Mark De Colvenaer (DSP Valley)
- Smart Cities? Why Now – Prof. Dr. Pieter Ballon (VUB)

19:00 - ...	Walking Dinner

Objective: Enjoy Belgian food and informally network with other Smart City stakeholders in the gardens of the Leuven Institute for Ireland. During the walking dinner the Moonshot Ideas developed during the afternoon will shortly be pitched.

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 320043

The developed Newsletter

In the meantime, a news was published on the CLINES website and a registration form developed to ease the inscription process.

LAST NEWS

15 Jun

CLINES Closing Event and Innovation Workshop

The Leuven Institute for Ireland in Europe, Janseniusstraat 1, 3000 Leuven, Belgium

The Clines Project - Closure Event

Urban areas are melting pots for new **opportunities**. They functionas connecting points for people wholive, work, meetand enjoy their spare time at the same place.In this way, urban areas represent the getting together of the known pastand the unknown **future**. People are eager to adopt new products and services which make their life, work and spare time more enjoyable and efficient. These new features will make them more resilient to future andoften unknown events.

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Workshop

The CLINES partners welcome collaboration from industry experts, researchers and others involved in related projects or technology development related with smart cities and embebed systems.

your comment

your name *

your last name *

your company *

your sector *

your position *

your contact e-mail *

I will attend the innovation workshop

I will attend the closing event

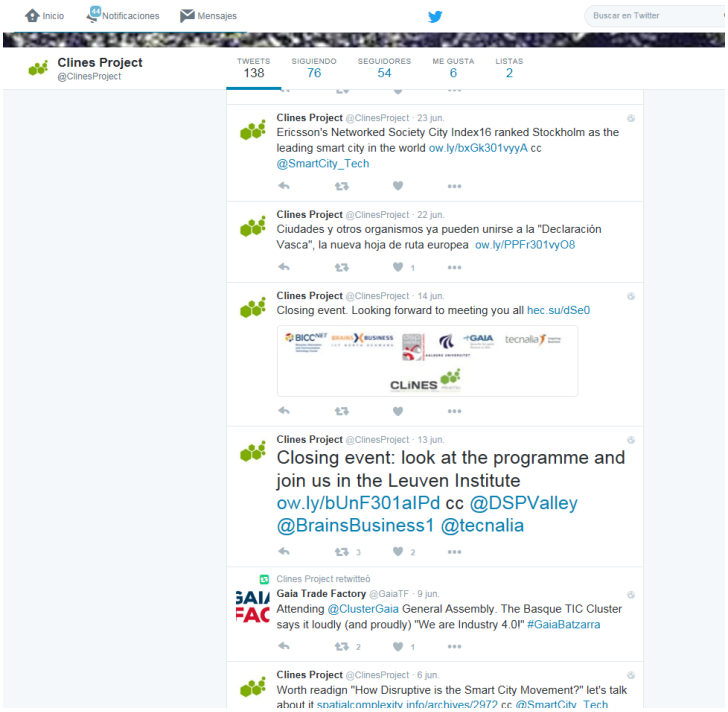
I stay for the walking dinner

Submit

* Required Field

CLINES website screen shots

At the same time we used the social media channel as an amplifier of our closing event



As the last action and to facilitate the project communication activity, a brochure was developed with the final Joint Action Plan, and a document was delivered to the attendants of the closing event in Leuven.

5.1 IoT Initiaves

From CLINES, we have been in contact with some IoT' initiatives as a mean to bring international stakeholders together in a cost efficient way to evaluate opportunities, interchange information in the area of 'City wide IoT networks', such is the case:

- 5th edition of IoT Week, Lisbon-June 2015
- "Oportunidades de Emprendimiento en IoT" – Iot Entrepreneurship Opportunities, Madrid-June2015
- Cebit, Hannover –March 2016
- IOT PLANET, Grenoble-October2016, in which through Silicon Europe Alliance, several CLINES partners will be participating.

6 Annexes

6.1 Annex I: Closing Conference Attendees List

Name	Organisation
Ivan Aaen	Aalborg University
Yasisine Abid	Achiles Design
Geert Adriens	Dekimo Experts Leuven
Jean Marie Aerts	KU Leuven
Nik Baerten	Pantopicon
Pieter Ballon	VUB
Greet Bilsen	KU Leuven
An Bogaerts	KU Leuven
Charlotte Boone	Flanders FOOD
Steven Conderaerts	Smartnodes
Veerle de Colvenaer	Flandersbio
Mar DeColvenaer	DSP Valley
Hilde De Man	Janssen Pharmaceutica
Dries De Roeck	Studio Dott
Jan Dekezel	Createlli
Frank Dethier	HEI
Willen Dhooge	FlandersBio
Sien Dieltiens	UA Productonwikkeling
Eva Flirizoone	Achilles Design
Johan Geysen	VITO
Katrin Geyskens	Capricorn Venture Partners
Mien Gillis	UNIZIO

Jo Goossens	Shiftn
Mieke Haesen	Universiteit Hasselt
Ronald Hermans	Kunstmaan
Frederik Horemans	MIC Vlaanderen
Anna Hristoskova	NEXOR, University of Antwerp
Martin Jorgensen	Xtel
Laura Lafuente	Createlli
Jessica Le Bris	Green City Projekt Gmbh
Unai Martinez de Estarrona	Tecnalia Research & Innovation
Fiona McGreal	Ingawellbeing
Johan Merlevede	Leuven MindGate
Cristina Murillo	GAIA Cluster TEIC
Peter Axel Nielsen	Aalborg University
Anne Bloksge Nielsen	Aalborg University
Kris Ooms	ShiftN
Steven Palmaers	Hogeschool PXL
Jan Potemans	Imec
Josu Santa Cruz	City of Bilbao
Kris Sienaert	Alma.care
Peter Simkens	DSP Valley
Arne Skou	Aalborg University
Henrik Staermose	Neogrid Technologies ApS
Sascha Stöppelkamp	BICCnet
Ivan Stuer	Vlaamse Overheis – Informatie Vlaanderen
Tim Tambuyzer	UCLL
Marina Toeters	By-wire.net

Cristina Urtiaga	GAIA Cluster TEIC
Stefan Van Baelen	iMinds
Bjorn Van de Vondel	DSP Valley
Fabian Van Dommelen	Unitron Group
Tine Van Lommel	KU Leuven R&D
Rudy Van Raemdonck	Verhaert New Products & Services
Annelies Vandamme	DSP Valley
Bart Vanhaeren	Bolero – KBC Securities
Charlotte Vanhoutte	Pantopicon
Tom Verbist	Achilles Design
Johan Vonk	Betronic BV
Jasmien Wynants	Flanders Fashion Institute

6.2 Annex II: CLINES Joint Action Plan

CLINES

CLINES
Joint Action Plan
Final

Leuven 15th June 2016

CLINES

Overall objective

The Joint Action Plan is an *action strategy* outlining the future development of the involved regions and cluster organisations.

"To define the particular actions taken by CLINES partners and regions to improve the domain of Embedded Systems for Smart Cities in Europe and in the four regions. The Joint Action Plan must drive economic development through both joint actions and regional actions within Embedded Systems for Smart Cities for the benefit of citizens."

Foundation

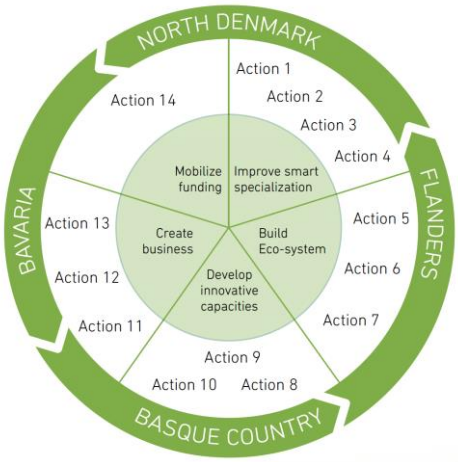
- Cluster competence analyses
- Trend roadmap analysis
- Regional match analysis
- Funding cataloguing
- Regional interest groups in the 4 clusters
- Mid-term joint action plan
- Internationalisation planning

Long-term Goals

1. Improve ESSC Specialisation
2. Build a Vibrant ESSC Eco-System
3. Develop Innovation Capability
4. Create More Business
5. Mobilize Funding Sources for ESSC

ESSC = Embedded Systems for Smart Cities

Goals and Actions



1. Improve ESSC Specialisation

Action 1: Create a common vision for ESSC based on the SWOT analyses
- Timeframe: 1 year

Action 2: Mediate across business sectors, public agencies, alliances, and initiatives related to smart city and urban development
- Timeframe: 2 years

Action 3: Establish a permanent smart city roundtable
- Timeframe: 1 year (Closer relations to cities 2 years)

Action 4: Communicate ESSC vision through show cases and convincing stories
- Timeframe: 1 year

Sub goals
- Create a joint vision
- Appreciate and leverage regional and joint strengths
- Focus on research effort
- Involve stakeholders
- Collaborate across sectors
- Create public and political awareness

2. Build a Vibrant ESSC Eco-System

Action 5: Create joint events and specific actions
- Timeframe: 1 year

Action 6: Establish a CLINES office to organise joint actions
- Timeframe: 3 years (smart city newsletter 1 year)

Action 7: Coordinate regional actions and impact
- Timeframe: 2 years

Sub goals
- Create a joint vision
- Appreciate and leverage regional and joint strengths
- Focus research effort
- Involve stakeholders
- Collaborate across sectors
- Create public and political awareness

3. Develop Innovation Capacity

Action 8: Facilitate innovation workshops and demonstrators
- Timeframe: 2 years

Action 9: Liaise between business and research groups
- Timeframe: 3 years

Action 10: Understand users and value-creating cases
- Timeframe: 2 years

Sub goals
- Develop innovation competences and capabilities
- Close research & technology gaps
- Stimulate SMEs as international innovators

4. Create More Business

Action 11: Build knowledge of business models
- Timeframe: 2 years

Action 12: Identify key industrial partners and establish matchmaking
- Timeframe: 1 year

Action 13: Reach for international collaboration
- Timeframe: 3 years

Sub goals
- Develop business models
- Unlock new opportunities
- Improve access to international partners
- Focus on SMEs and start-ups

5. Mobilize Funding Sources for ESSC

Action 14: Exchange knowledge of public and commercial investments
- Timeframe: 2 years

Sub goals
- Facilitate public-private-partnering
- Provide knowledge of commercial investment, entrepreneurial funding, and venture capital

Contribution to strategies

	Strategies				
	Smart Specialisation	Knowledge Transfer	Innovation	Funding	Research
Action 1	√				
Action 2	√	√			
Action 3	√	√			
Action 4	√	√			
Action 5	√	√			
Action 6		√	√		
Action 7		√	√		
Action 8			√		
Action 9					√
Action 10			√		√
Action 11		√	√	√	
Action 12	√	√	√		
Action 13		√		√	
Action 14				√	

JAP and Internationalisation

What's Next?

- Implementation through
  1. CLINES partners track local smart city needs and priorities
  2. CLINES stakeholders define cross region synergies to further elaborate on together
  3. CLINES stakeholders are mobilized to take responsibility and to develop a joint team to further develop and execute the prioritized joined actions
- CLINES support platform: Act – Monitor – Adjust
- Policy recommendations for political decision-makers (Deliverable D4.4)

6.3 Annex III: Showroom Framework and CLINES Present and Future

Immerse yourself in an urban future enabled by wearable technology

CLINES closing event – June 15, 2016

1 6/06/2016

Agenda

- 12u00 – 13u00: Registration and lunch
- 13u00 – 17u00: Innovation workshop
- 17u00 – 17u30 : Break
- 17u30 – 19u00: Plenary Session
- 19u00 – 20u30: Walking Dinner

2 6/06/2016

About Us

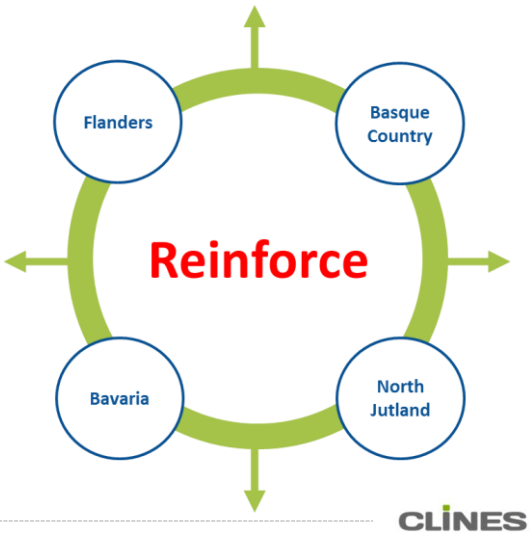
- Cluster in smart electronic systems and embedded technology solutions
- 120 members: industry, academia
- Headquarters: Leuven (BE), Eindhoven (NL)
- Activities: Matchmaking, Exhibitions, Innovation Support, development of new value chains
- Strong international network: Silicon Europe Alliance

What is Clines all about?

A consortium of 4 european research driven clusters committed to stimulate international cooperation and innovation in the area of smart systems for urban areas.

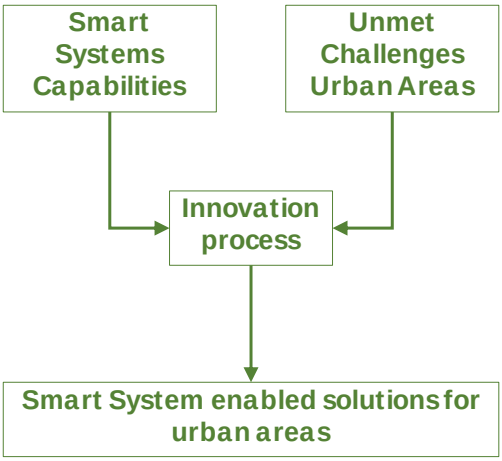
Joint action plan

Internationalization plan



CLINES

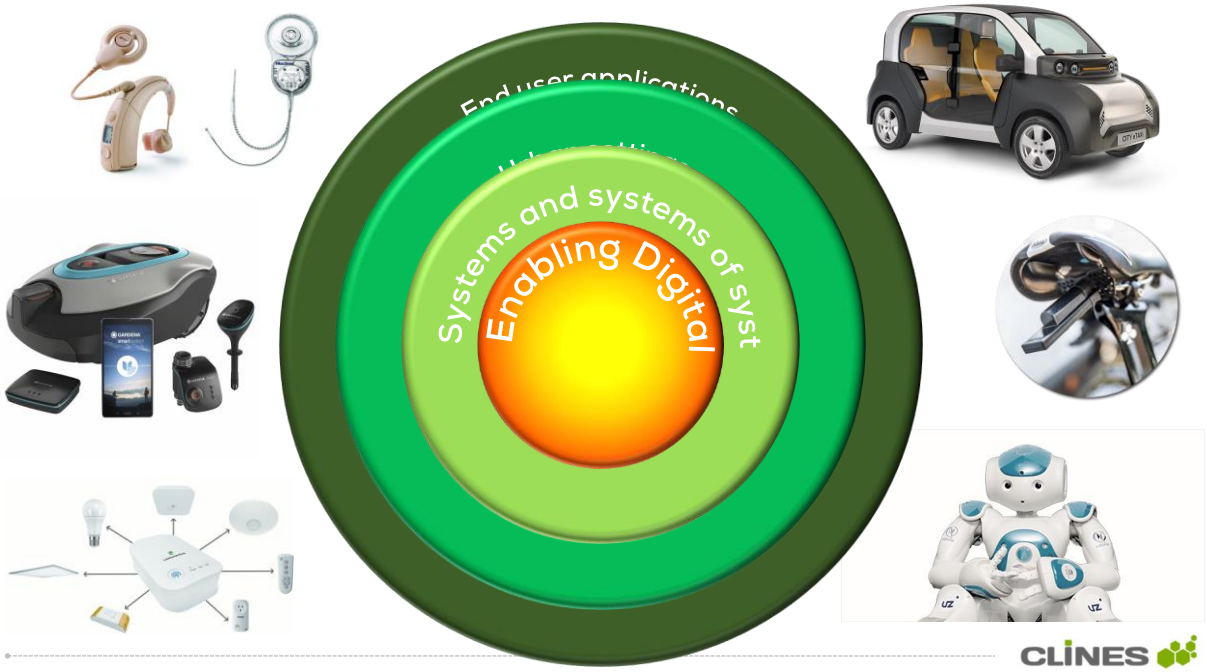
What are we aiming at?



Drive economic development in the domain of Smart Systems for Urban Areas

- Improve joint smart specialization (vision)
- Build a vibrant ecosystem
- Develop innovation capacities
- Create more business
- Mobilize funding

CLINES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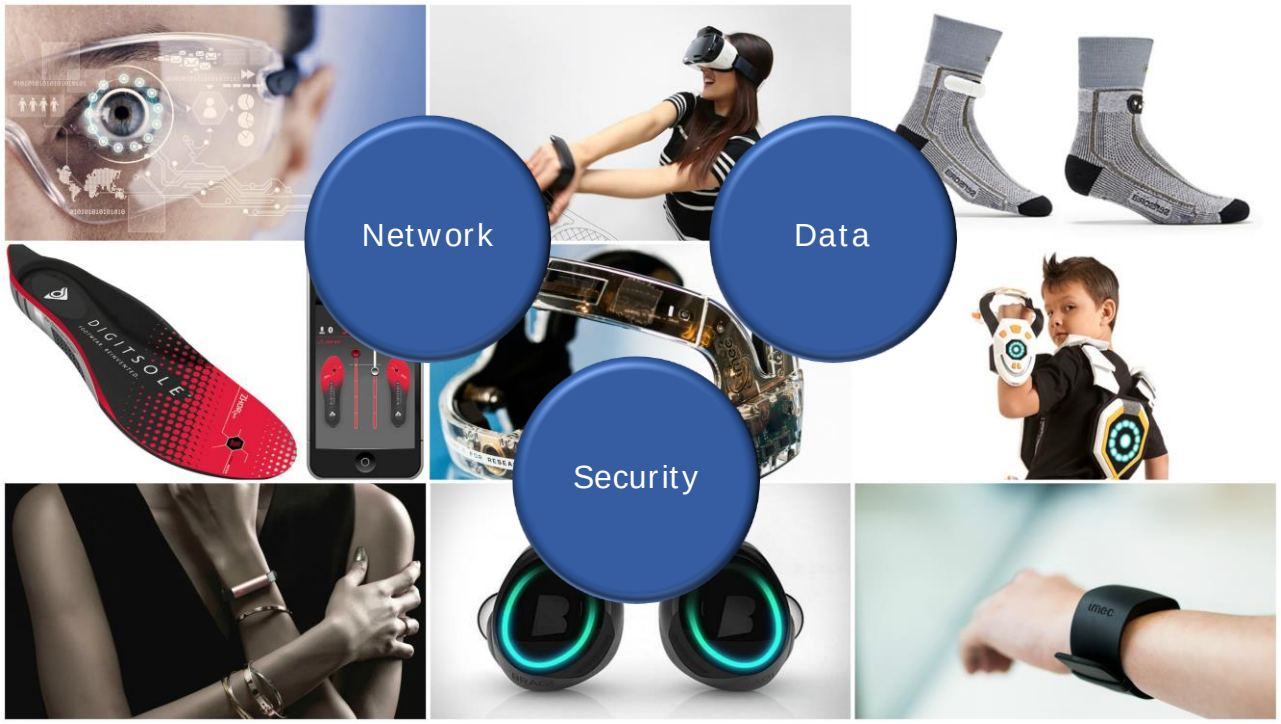
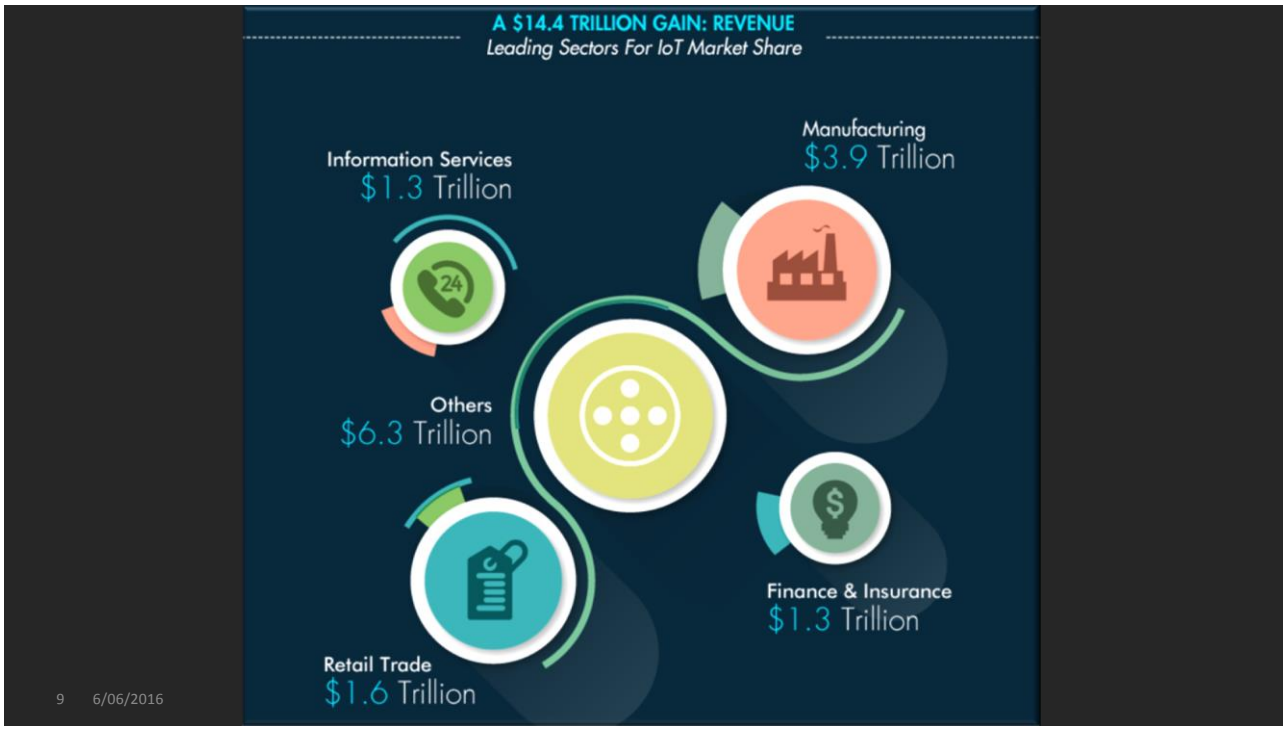
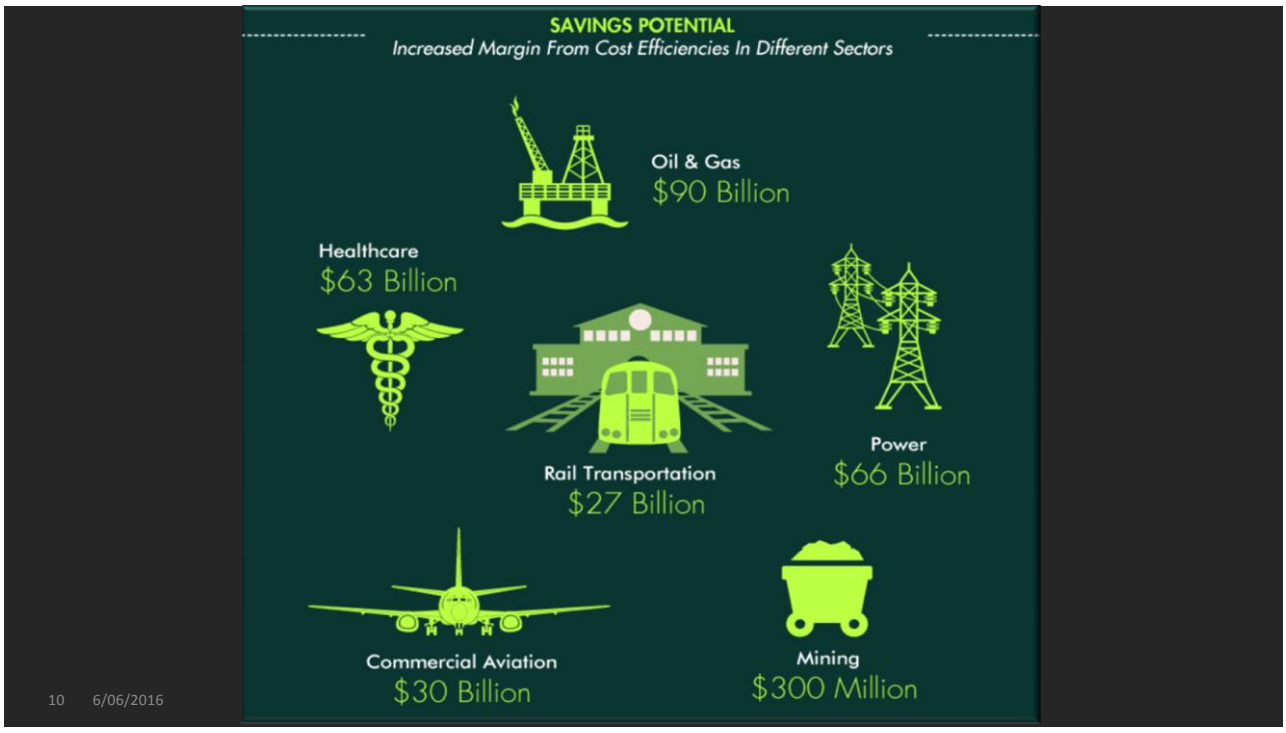
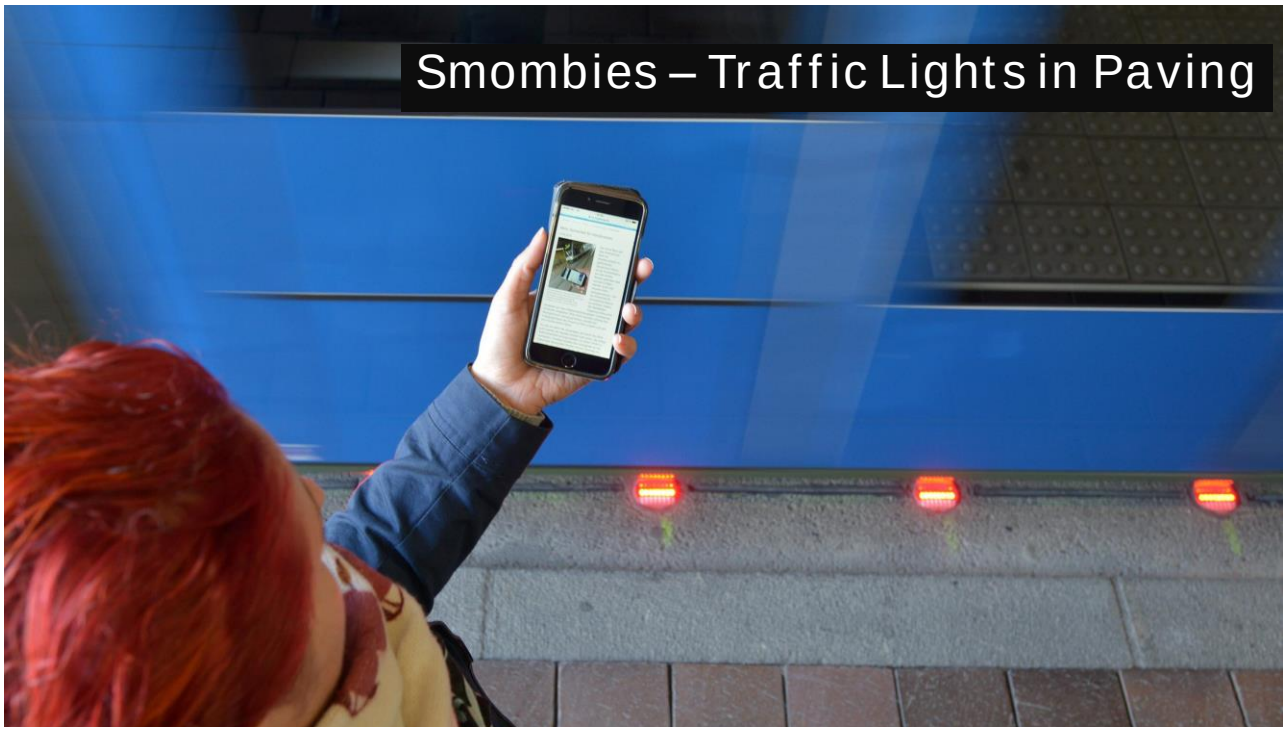
Enabling Digital
CLINES


Network
Data
Security


A $14.4 TRILLION GAIN: REVENUE
Leading Sectors For IoT Market Share
Information Services
$1.3 Trillion
Manufacturing
$3.9 Trillion
Others
$6.3 Trillion
Finance & Insurance
$1.3 Trillion
Retail Trade
$1.6 Trillion
9 6/06/2016

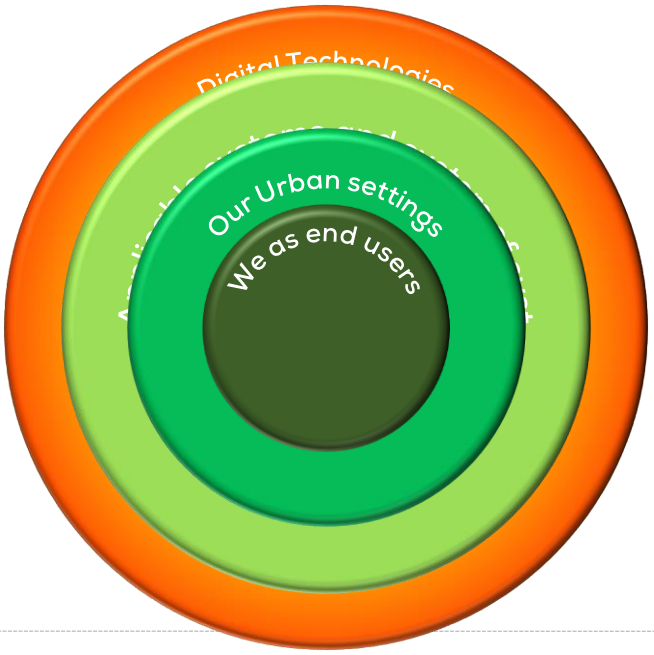

SAVINGS POTENTIAL
Increased Margin From Cost Efficiencies In Different Sectors
Oil & Gas
$90 Billion
Healthcare
$63 Billion
Rail Transportation
$27 Billion
Power
$66 Billion
Commercial Aviation
$30 Billion
Mining
$300 Million
10 6/06/2016

LEVERS TO UNLOCKING REVENUES
Levers that unlock billable market value
Customer Experience
$3.7 Trillion
Innovation
$3.0 Trillion
Supply Chain & Logistics
$2.7 Trillion
Employee Productivity
$2.5 Trillion
Asset Utilization
$2.5 Trillion
11 6/06/2016


Smombies – Traffic Lights in Paving

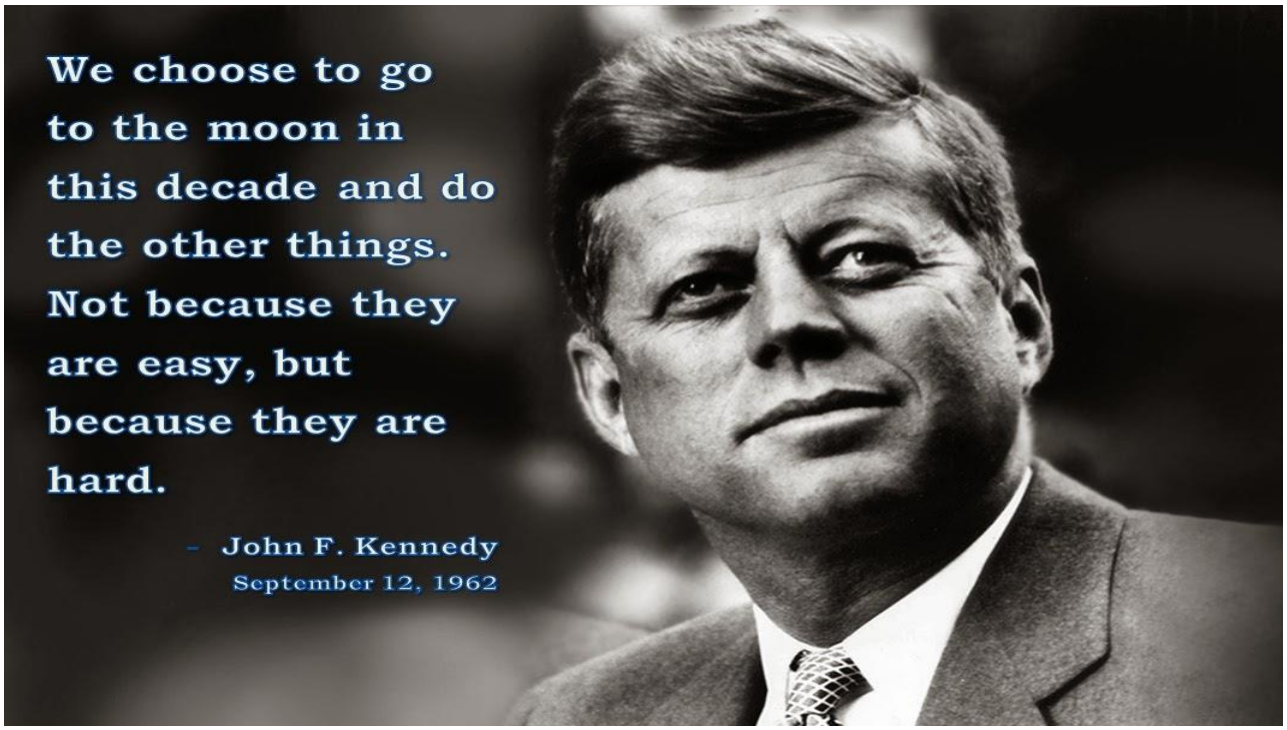
Technological innovation is often simply an innovation in how <u>we</u> think about technology

14 6/06/2016



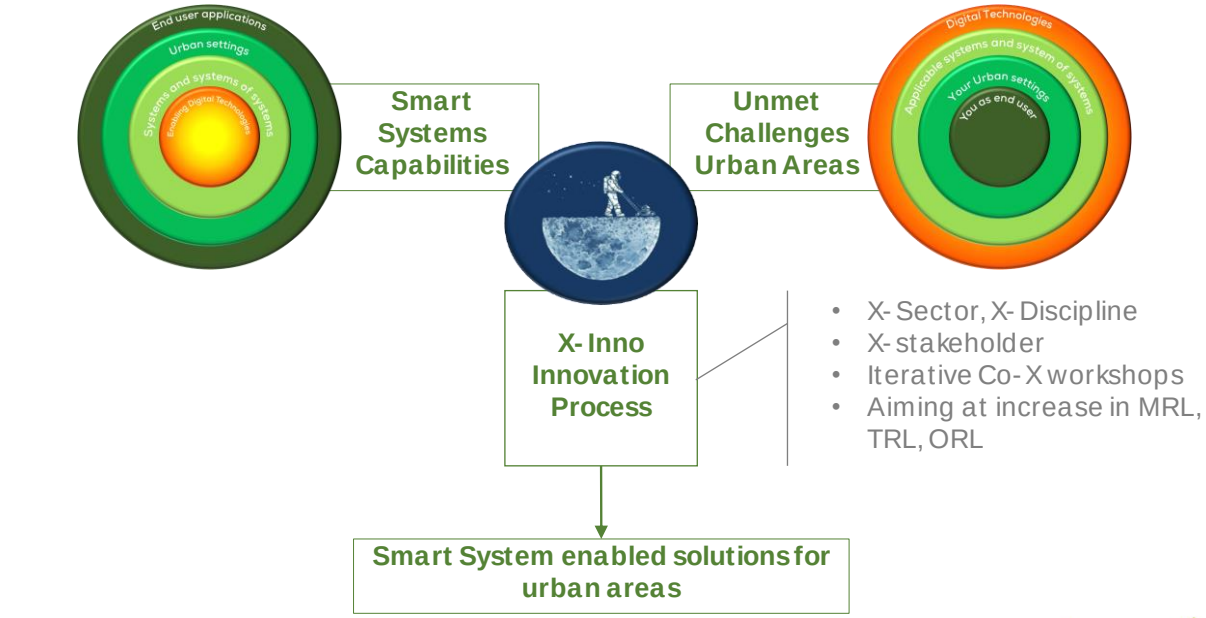
15 6/06/2016

Moonshot thinking
Going 10x bigger instead of 10% improvement
When you shoot for 10x improvement you approach the problem in a radically different fashion
Attack a problemas though it is solved
100 times more worth it, but never 100 times harder



The biggest benefit of the Apollo was the inspiration it gave to a growing generation to get into science and aerospace

Buzz Aldrin, Astronaut



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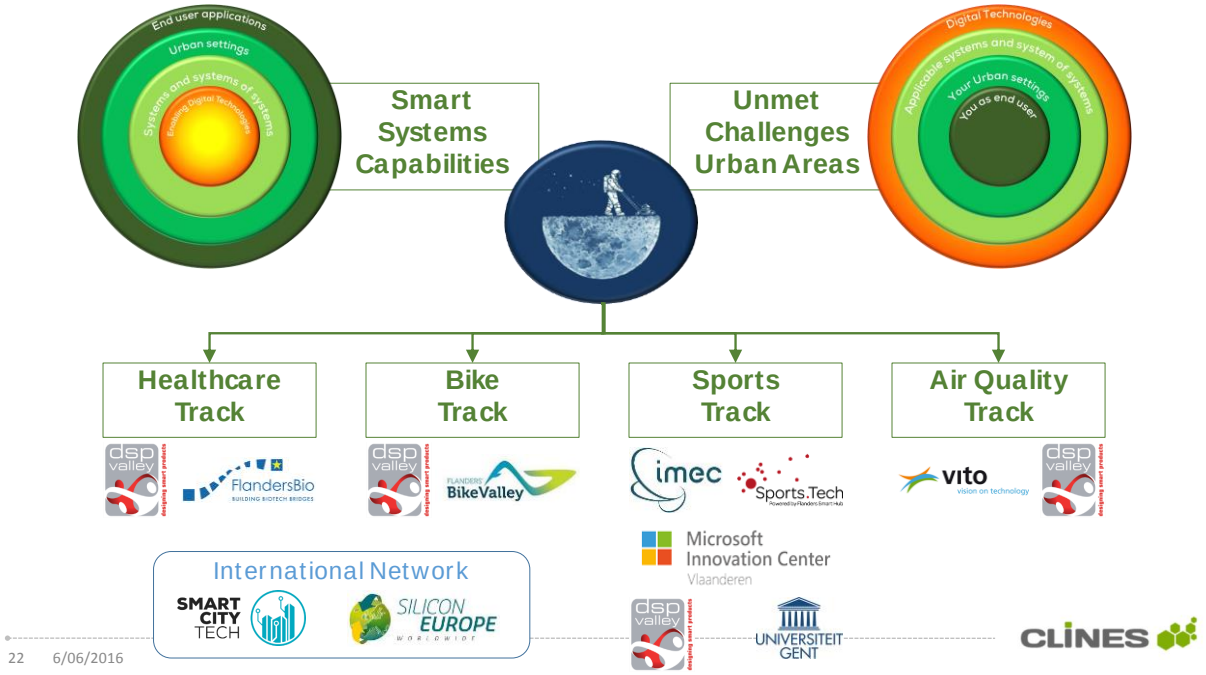

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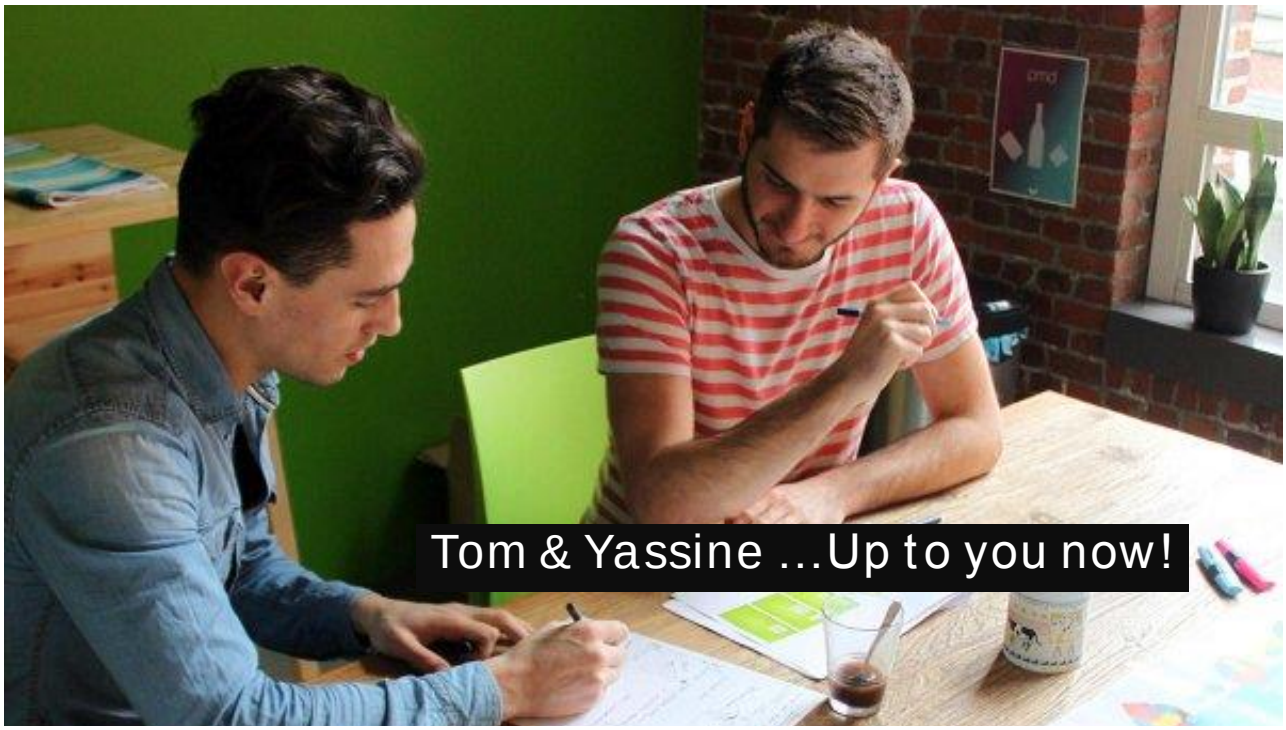
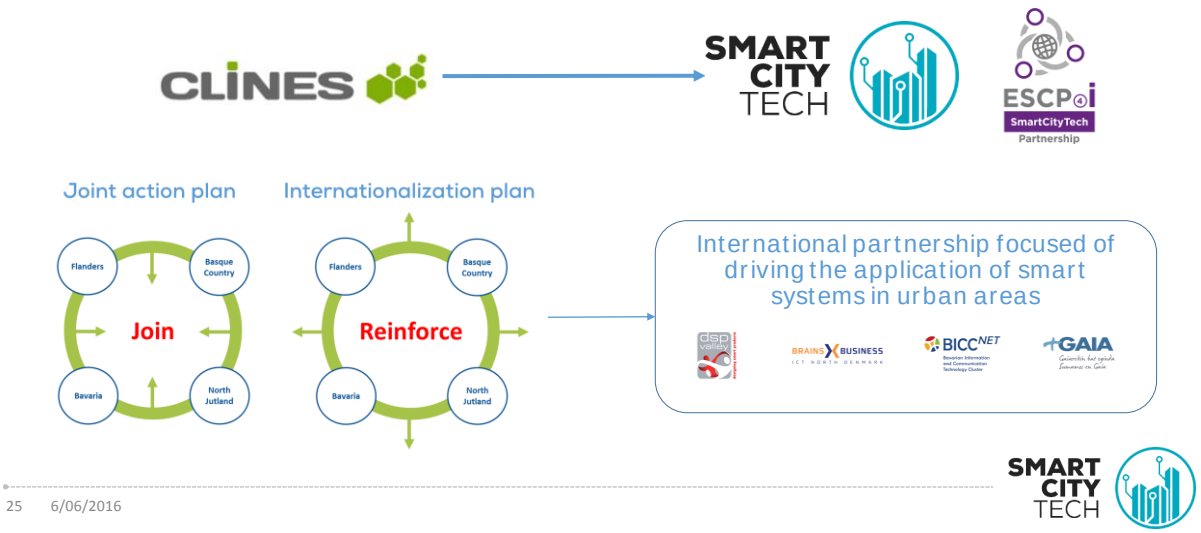


Agenda

- 12u00 – 13u00: Registration and lunch
- 13u00 – 17u00: Innovation workshop
- 17u00 – 17u30 : Break
- 17u30 – 19u00: Plenary Session
- 19u00 – 20u30: Walking Dinner



Welcome

- The Clines Joint Action Plan – Prof. Peter Axel Nielsen (Aalborg University)
- Bilbao's experience in Smart Cities – Josu Santa Cruz (City of Bilbao)
- City eTaxi, more than just a taxi. New solutions for the connected (e)mobility of tomorrow – Dr. des. Jessica Le Bris (Adaptive City Mobility – Munich)
- Smart Cities? Why Now? – Prof. Dr. Pieter Ballon (Vrije Universiteit Brussel)
- Debate – 5 key ingredients for the smart city of tomorrow

5 key ingredients

- The city as permanent living lab
- Ambitious and measurable objectives
- Leadership (a CTO) with a stepwise approach
- A regulated smart city architecture
- The development of smart regions

27 6/06/2016

SMART CITY TECH

Mark De Colvenaer
SmartCityTech | DSP Valley

mark.decolvenaer@dspvalley.com

+32 16 24 14 40
www.smartcitytech.eu

6.4 Annex IV: Bilbao City Case Presentation

CLINES Closing Event

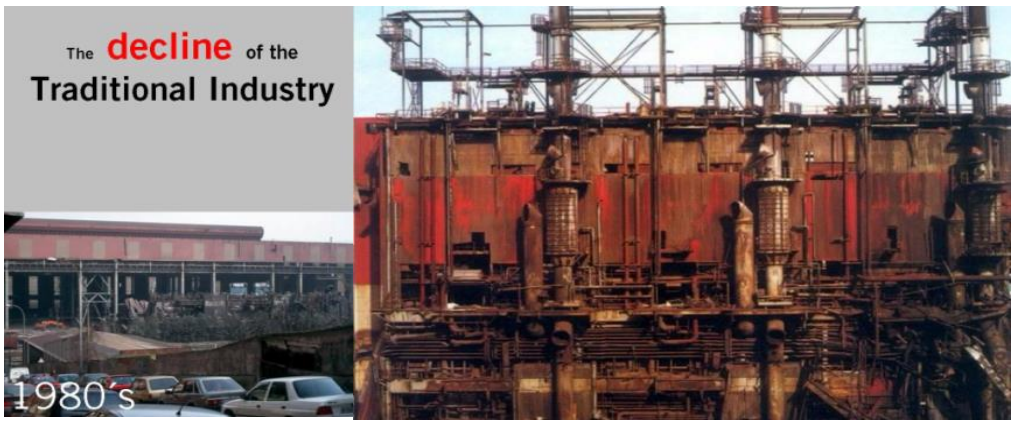
Creating an intelligent urban platform to manage Big Data and IoT within the city

Bilbao
UDALA
AYUNTAMIENTO

Urban Innovation
Knowledge Management
Citizen Participaction
International Collaboration

From the Urban Revolution to the Knowledge Revolution

Bilbao City History



- 2-

Bilbao

Urban Innovation

Bilbao´s New Architecture

1. Rehabilitation of the Historic Centre
2. Enlargement of the Port
3. Freeing up spaces along the River
4. Development of Bilbao Ría 2000
5. The drainage of the River
6. Bilbao faces the River
7. Old and new bridges
8. Bilbao´s underground system
9. The Airport
10. The Guggenheim Museum
11. Museums and Art Institutions
12. AbandoIbarra
13. Transformation in the Ensanche
14. The elimination of railway barriers
15. The new tram
16. Large Equipments
17. New Hotels
18. The Zamudio Techno-Park
19. Micro-spaces for social integration
20. Bilbao la Vieja
21. The recovery of Traditional Architecture
22. **Bilbao´s New Architecture**
23. Art in the City
24. International Recognitions
25. Dreaming up the Future

- 3-

Bilbao

ICT and Innovation: Tools to improve competitiveness of Cities

- *Goal of the City of Bilbao:*

To build a competitive city based on knowledge management and innovation

- 4-

Bilbao

Vision 2019

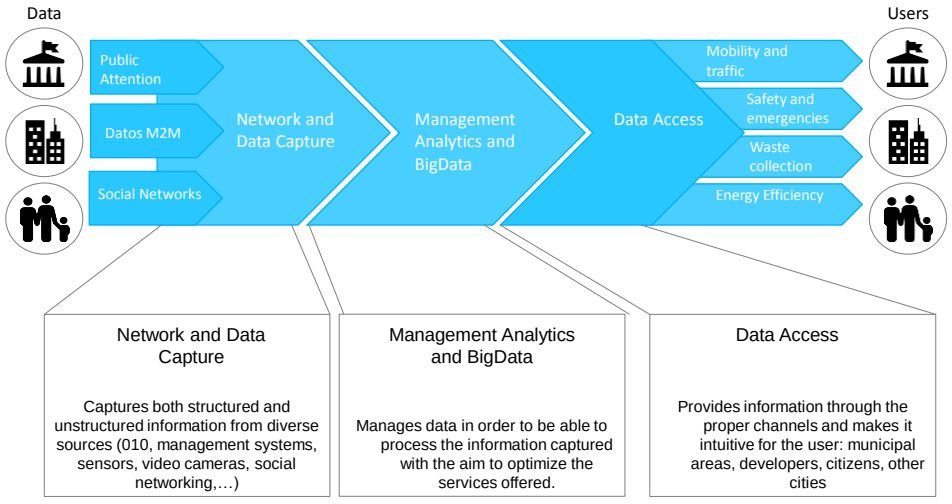
"Bilbao, an city innovative, sustainable and open to the world, that efficiently leverages the potential of new technologies to contribute to economic and social development of the city and increase the quality of life of its citizens".

A city with a intelligent model of management..	A model of open government maintaining its management as key economic rigor and the pursuit of efficiency, transparent, participatory and collaborative and even closer to its citizens and business community through the opportunities offered by new technologies.
A more sustainable city ...	Thanks to intelligent and interconnected infrastructures that allow having information in real time and access to knowledge and information anytime, anywhere, that incorporates technology to urban services to improve the sustainability and environmental quality, functionality and accessibility, comfort, mobility, and security in urban space.
A city open to the world ...	A city recognized internationally as a model for other cities. With an innovative image while preserving its special character based on its culture and values.
A city economic and social development oriented...	That power an open, collaborative and technologically advanced innovative ecosystem that promotes entrepreneurship and employment and creating opportunities in strategic sectors of the city by supporting the creation and implementation of new technology solutions that contribute to increased productivity and competitiveness of the business of Bilbao. empresarial de Bilbao.
A city designed for people....	Providing digital services geared to citizens, their needs and expectations, encouraging, through technology, active participation in public life and increasing their welfare with a wide range of city services and infrastructure.

- 5-

Bilbao

Towards a High Performance City



Network and Data Capture

Captures both structured and unstructured information from diverse sources (010, management systems, sensors, video cameras, social networking,…)

Management Analytics and BigData

Manages data in order to be able to process the information captured with the aim to optimize the services offered.

Data Access

Provides information through the proper channels and makes it intuitive for the user: municipal areas, developers, citizens, other cities

- 6-

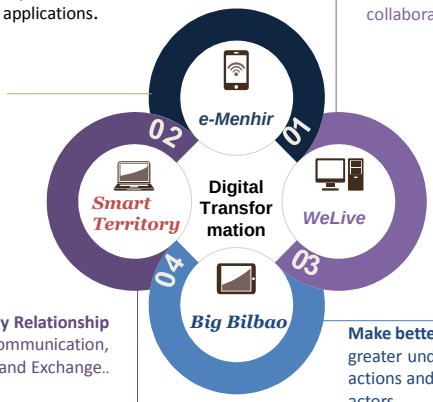
Bilbao

Projects for digital transformation

The City Council leads several strategic projects to promote the digital transformation of the city..

Technologies for sensing, communications and exploitation of data, for greater efficiency and new municipal services and applications.

Co-creation of urban mobile services with citizens, businesses, other agents,... to transform e-Administration and collaboration.



Smart Territory Relationship changing patterns of communication, interaction, trade and Exchange..

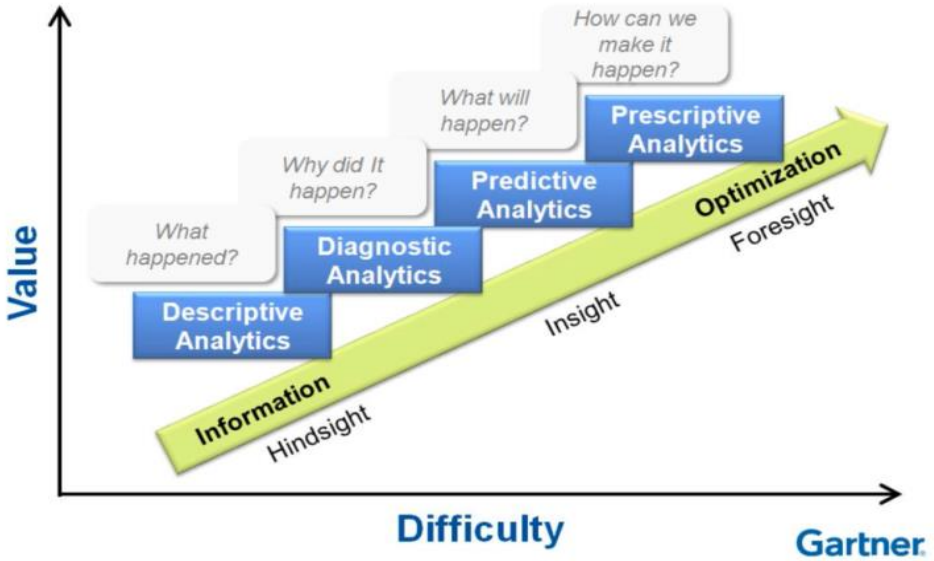
Make better decisions thanks to have greater understanding of the impact of actions and changes in chain between all actors.

PwC

- 7-

Bilbao

Big Data leads to new knowledge



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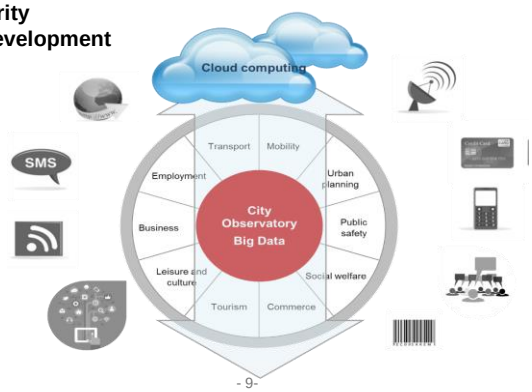
Bilbao 8

BigBilbao

- The idea is to feel the City, how the city is used and how citizens feel in the city, but also to dynamize social and economic activity in the city. It is not enough to only feel the city by observing, it is necessary to understand, visualize and act in consequence by fostering socio-economic activity within it.
- Changing our traditional way of analytics by combining more , new , real time Datasets. Doing the same things in a different way. Big Data is not the solution, its an enabler to solve city problems

- The areas of expertise that we´re working are:
  - **Citizen Security**
  - **Economic Development**



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Bilbao

BigBilbao : An Expert system of City Intelligence

Objetives

1 Improve the knowledge of the Administration and the city activity to optimize decision-making, from different stakeholders

2 Develop an city intelligence system allowing to make situation analysis, forward-looking and trends, in order to improve decision-making processes

3 Define the infrastructure base of an intelligent City based on descriptive, predictive and prescriptive models in big data, inclusive, multiple sources of data, structured and unstructured, with capacity for growth and analytical geospatial, modular and easy scalability and integration with elements of city and Internet of things

- 10-

Bilbao

BigBilbao : An Expert System of City intelligence expert system

The benefits to the city of Bilbao pursues with putting in operation of the expert system of intelligence of city - Big Bilbao project focuses on the following aspects:

- Boost internal mechanisms for continuous improvement through the identification and tracking of key performance indicators
- Evaluation of the impact and efficiency of the actions, programmes or projects to determine its usefulness and its continuity
- Get greater operational efficiency and improvement of the relation cost/impact through the development of new service models
- Ensure quality services, sustainable, accessible and efficient to develop a model of care based on an integrated and personalized management
- Promote an effective, efficient, transparent and open administration that encourages the participation in administrative activity and the development of the city
- Promoting the development of capabilities and technological skills of the staff of the City Council

Flows of information in Creative Exploration

URBAN TRADE
- Type of buyers
- Average shopping
- Padrón
- Resident purchaser / visitor
- Purchase fidelity
- Purchase flight
- Valuation of the offer in social networks
- Flow of people
- Distribution model
- Accessibility
- Security / crime
- Furniture / cleaning

EMPLOYMENT
- Unemployment rate
- Type of stand
- Type of training offers
- Quality of training offers

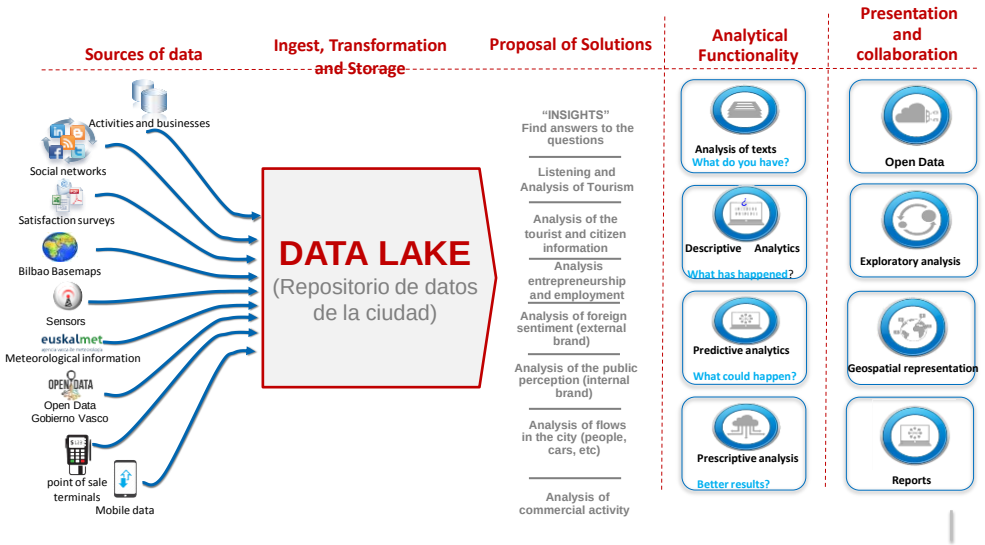
ENTREPRENEURSHIP
- Type of companies created
- Strategic sectors
- Incentives to entrepreneurship
- Activity Auzofactories
- New business sustainability capacity
- Advisory services

INVESTMENT AND TALENT
- Activity "Invest in Bilbao"
- International talent
- Island of the new economy and talent activity
- Industrial pole in Punta Zorrotza
- Campus activity
- The investor support services
- Foreign investment
- Development of talent

MARK BILBAO
- Standard of living
- Social equality
- Economic power of the city
- Impact of local economic policy
- Internationalization of the city
- European projects in Bilbao
- International events

TOURISM PROMOTION
- Tourist positioning
- Activity Tourism Office Plaza Circular
- tourists
- Activity tourism sector
- Cultural identity of Bilbao
- Tourism of congresses and conventions
- Feeling of the tourist tourists POS transactions
- Tourism promotion material
- tourist and comercial routes
- presence at trade fairs

Functional platform Big Data



Use Case of Citizen Security

New police model of neighborhood orientation

Boost security in special risk group

Case of prediction and prevention of crime

- Offences
- Detainees
- People of interest
- Other data?
- Indoor
- Trades of interest
- Identifying risks of offences (predictive)
- Heat maps
- Risk levels
- Plans of action (SOP

- Time
- Type of crime
- Geographic data
- Detained attributes / PI
- Calendar and events
- Meteorological information

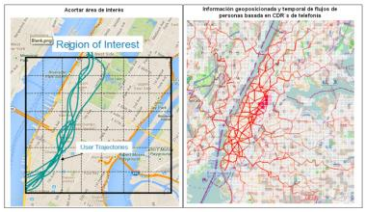
Use case of People in motion

Visión

Understand and analyze the flow of people in the city to support decision making in many areas. The solution facilitates the geo-positioned and temporal information of the flows of persons in areas to be determined using the information of the CDRs of telephone companies.

Benefits

- Support for entrepreneurship: supports the identification of well connected for establishment of local commercial locations.
- Transport planning: identification of busy roads.
- Safety: Knowledge of concentration of large volumes of



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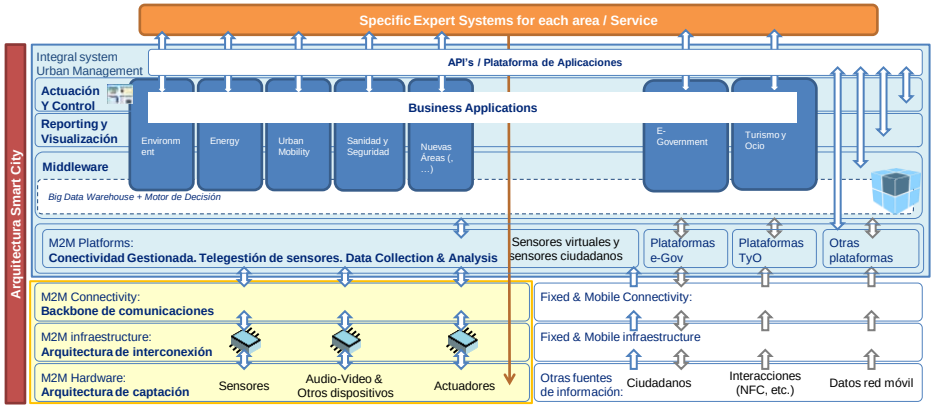
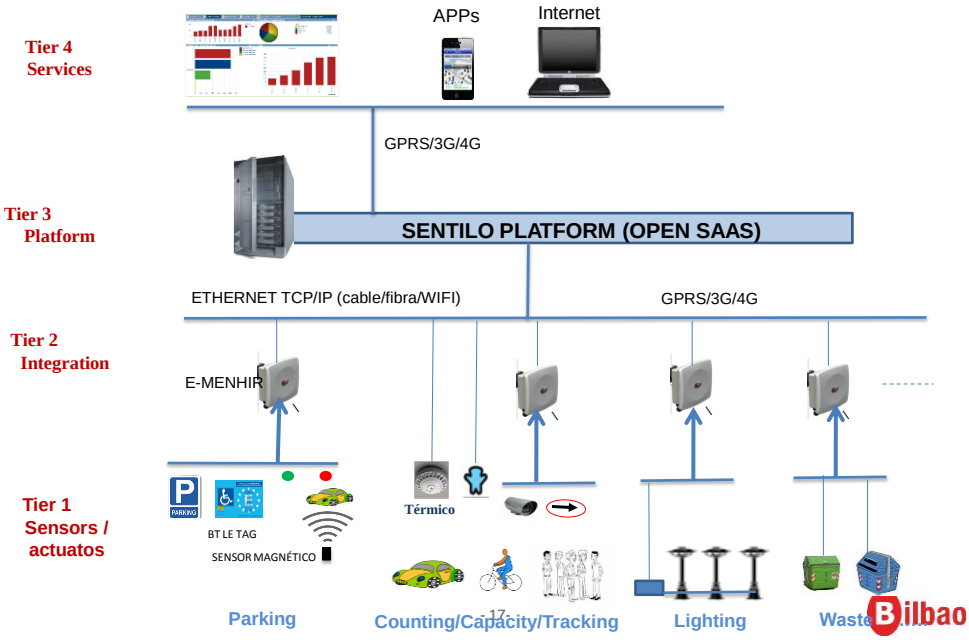
Bilbao

A Smart City is supported by a system architecture



Funtional Architecture e-Menhir



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Urban Platform : e-Menhir Project

Goals

- With the e-Menhir project aims to provide cities sensing hardware and communications infrastructure and services, modular and scalable use by local councils or innovative service providers. With a commitment to the deployment of ICT infrastructure to take advantage of existing infrastructure, resulting in faster, wider and more economical deployment.

Consortium

- The project presents a Consortium formed by the following entities:
  - Companies: Hispavista, Ibermática, Light Consulting, Euskaltel, MASER Microlelectrónica, Dinycon, STT Engineering and Systems
  - Organisms belonging to the Basque Network of Technology Centres: IK4 Tekniker, Ibermatica Institute of Innovation, Hispavista Labs and
  - Counsil City : the role of Associates Bilbao City Council, the City of Zamudio and Cimubisa own.

Applications

- We have identified the following key features:
  - Mobility
  - Environmental Monitoring
  - Lighting control and monitoring of electricity consumption of the luminaire
  - Security of goods and people
  - Citizen Services
  - …

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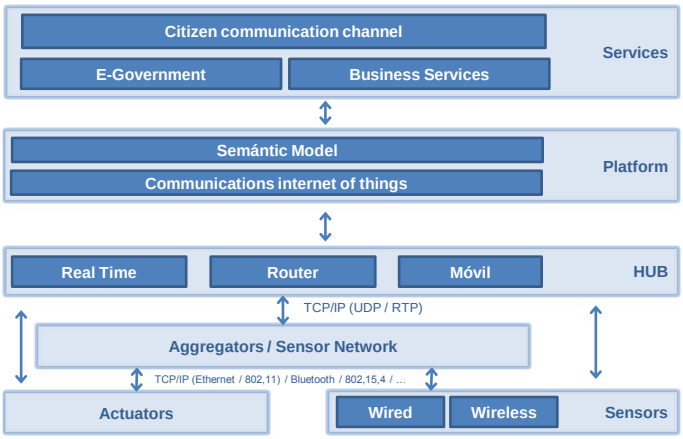
Bilbao 18

Architectural Project e-Menhir / Business Consortium



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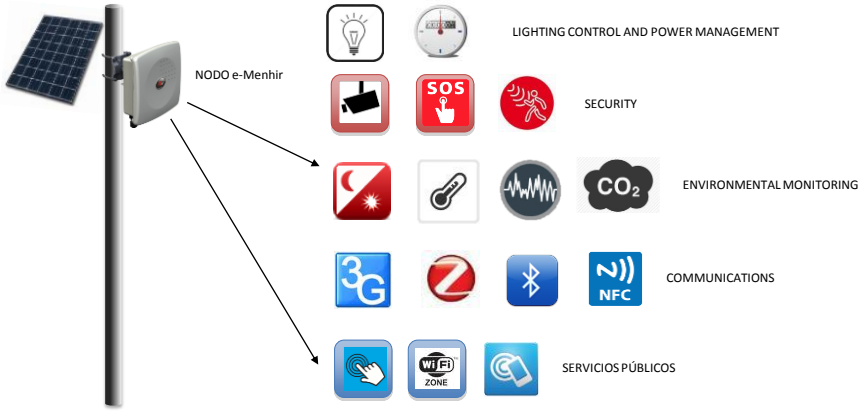
Data acquisition: Sensing of the e-Menhir Project



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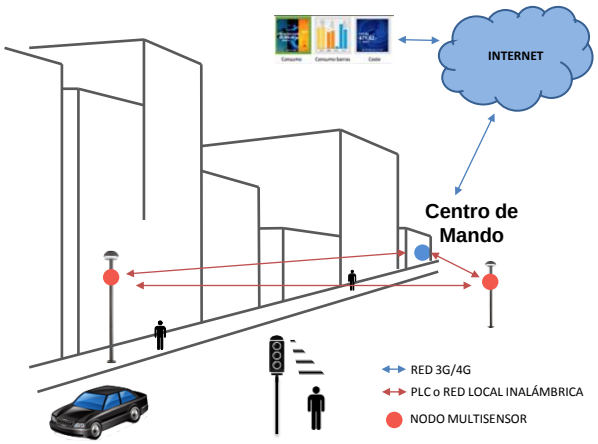
Business processes : Use Cases of the e-Menhir project

Projects:

- Mobility :
  - Behavior city: Transit pedestrians
  - Behavior city: Traffic
  - Management of car parking areas disabled and loading / unloading
- Environment Monitoring:
  - Noise and air pollution
  - Treatment Water Management
  - Management and Control lighting
  - Waste Management (fifth container, container yellow, blue, ...)



21

Bilbao

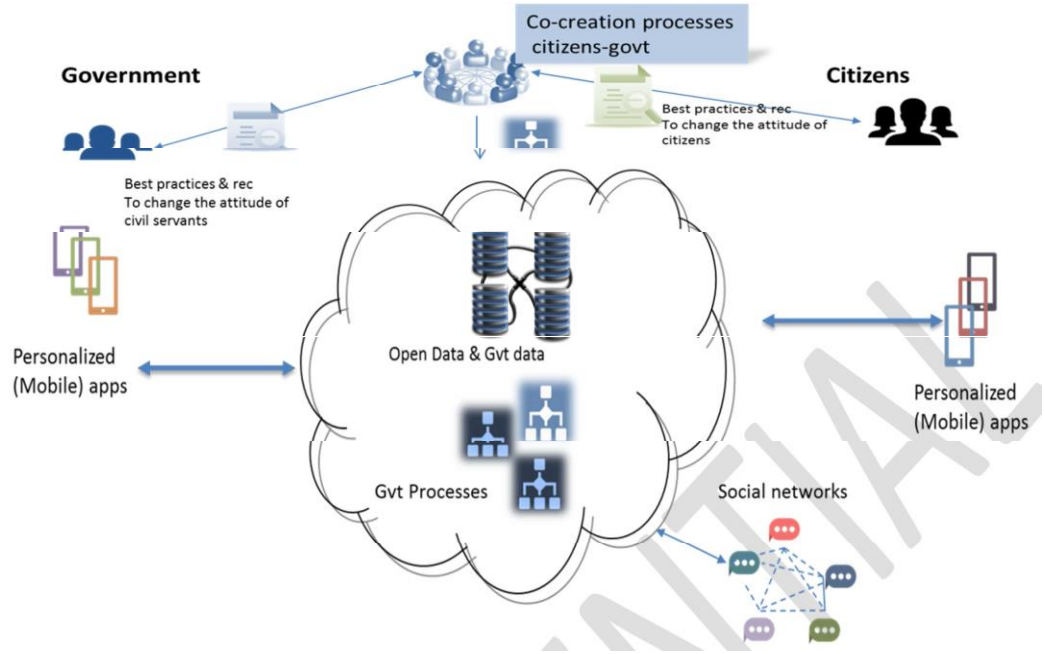
Smart City Labs : Development and performance measurement model

Very relevant aspects to consider:

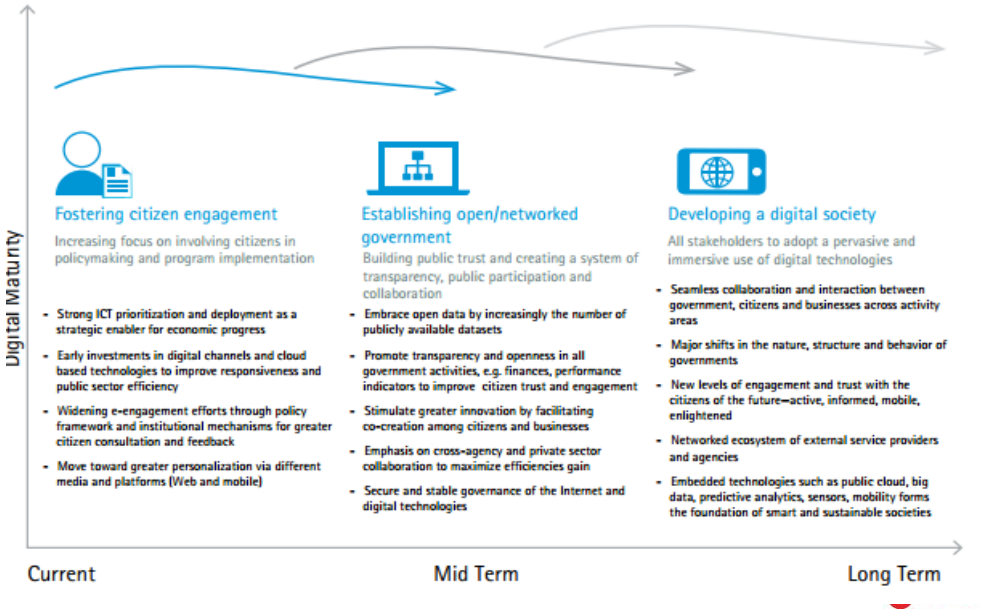
- Need to develop user acceptance studies and feasibility studies for different application scenarios service demands of citizens
- Active involvement of citizens and businesses in the development of new services
- Prototyping work and feasibility studies for different application scenarios
- Consider the cities as a complex ecosystem where municipalities, companies and, above all, citizens must contribute to the quality of life of people and generating wealth from the development of new business opportunities, tourism and the like.

Bilbao 22

Bilbao Big Data Observatory



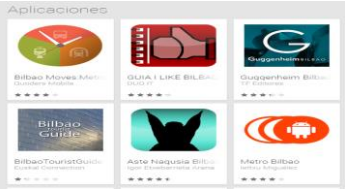
Mobility Applications for City



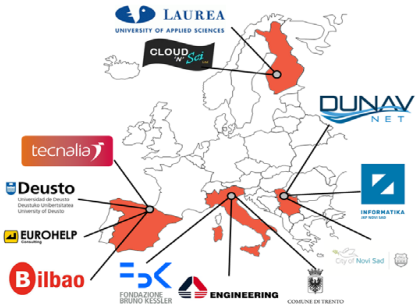
Mobility Applications for City

- Market Applications

Third-party Applications



We-Live Project :Consortium partners



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Bilbao

WeLive

WeLive

A novel We-Government ecosystem of tools (Live) that is easily deployable in different PA and which promotes co-innovation and co-creation of personalised public services through public-private partnerships and the empowerment of all stakeholders to actively take part in the value-chain of a municipality or a territory

Open Data **Open Services** **Open Innovation**

02/08/2016

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WeLive: A neW concept of pubLic administration based on citizen co-created mobile urban services

Bilbao

How?

Citizens

- Users collaborate in the **definition of the digital identity of the city**
- Citizens **produce and consume contents** (super-prosumer concept)

Companies

- Creation of services exploited by **local businesses**
- Platform enabling the chance to **create services** based on **user needs**, bringing new possibilities

P. Administration

- The interaction with the users enables them to **improve and foster** the use of their deployed sensors in urban areas and **open databases**
- Citizens are involved in **decision-making**

Key aspects

1 **Area of open Data**

WeLive provides an open data toolset which eases to capture, transform, adapt, link, store, publish and search for data.

2 **Area of open Services**

WeLive provides an open services framework based on B. blocks and app templates. These will be easily combined to give place to new services

3 **Area of open Innovation**

WeLive focuses on how to pass from innovation to adoption, by democratizing the creation process and fostering pp partnership.

4 **Area of User-centric Services**

WeLive enables personalization of public service apps based on user profile and context though the Citizen Data Vault, Visual composer and WeLive decision engine element.

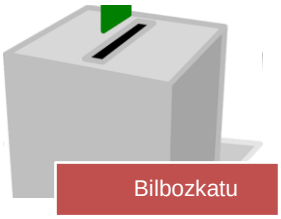
Internationalization collaboration on ICT

Bilbao City Council is committed to establish international collaborative frameworks oriented to:

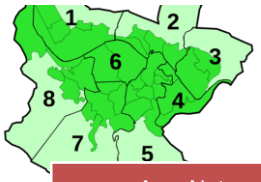
- **Identify new opportunities** for the present and future development of ICT in the city by identifying best practices in ICT intelligent management conducted by major "smart cities", in the national and international scene, which could be taken as a reference by Bilbao in its commitment to innovation and in the construction of its smart city project.
- **Accompanying other cities** interested in the development of ICT based in BILBAO's model, thus contributing not only to the positioning of the city but also to the generation of a pull effect for companies in the ICT sector who have accompanied the city in this process, incorporating them in the Bilbao's business case.
- **Strengthen the management** of the City of Bilbao on ICT.

Mobile services selected for Bilbao

WeLive



Bilbozkatu

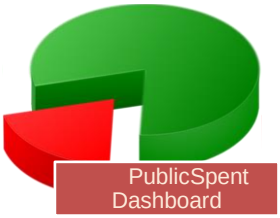


AuzoNet

Faborenet

Bilbonergy

BilbOn



PublicSpent Dashboard

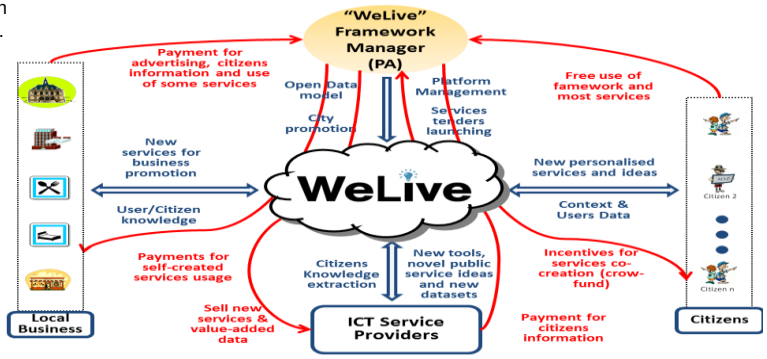
We-Live Market Place

It covers the entire life cycle process of creating mobile solutions (idea generation, solution development, marketing, ..) with the participation of citizens, businesses, government, ..)

It will be a repository of data, building blocks and public service applications that can be browsed, selected and purchased by the different stakeholders of WeLive solution.

The market is the place to look to identify solutions / building blocks / data available.

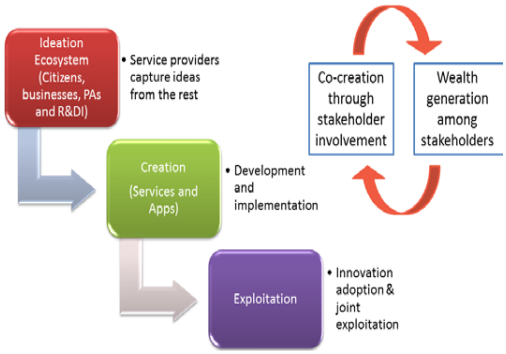
It is the main component to exploit the economic potential presented by the proposal WeLive. Different monetization approaches.

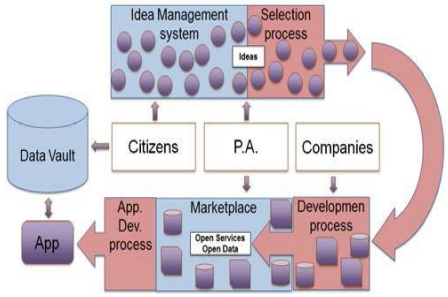


- 31-

Bilbao

Participation of citizens





Citizen as Sensors

User Participation: A key component of the project. The participation of citizens or other agents of the city throughout the project life is sought.

To do this it will work with Methodologies and tools to facilitate such participation.

- 32-

Bilbao

10 City Projects 2011-2019

Area of knowledge	City Project	Short to Medium Term	Short to long Term
Analitycs	SCORECARD CITY	2014-2015	
	OPEN DATA PORTAL	2014-2015	
	BIG DATA OBSERVATORY		2015-2019
Mobility	GEOGRAPHIC PORTAL	2011-2015	
	MOBILITY APPLICATIONS FOR CITY	2011-2015	
	INTELLIGENT TRANSPORT SYSTEM	2011-2015	2015-2019
Cloud	CLOUD CITY COUNCIL APPLICATIONS	2011-2015	
	CLOUD INFRASTRUCTURE OF THE CITY		2015-2019
Internet of Things	URBAN SERVICE PLATFORM		2015-2019
	INFRASTRUCTURE OF THE CITY	2011-2015	

6.5 Annex V: Munich City Case Presentation

Adaptive City Mobility

Green City Projekt
Die Umwelt-Projekt-Agentur

CITY eTAXI - more than just a taxi.

New solutions for the connected (e)mobility of tomorrow.

Dr. des. Jessica Le Bris

Leuven, 15.06.2016

Adaptive City Mobility (ACM) or the CITY eTAXI

1. **Development of an integral e-mobility system**
   - e-light vehicles
   - Charging infrastructure
   - Software

2. **Testing of use cases with a pilot e-fleet in Munich**
   - City logistic & Business fleets
   - Car-sharing & Car-pooling
   - **Taxis** & **beyond**

3. **Business models & Industrialization**

Adaptive City Mobility Green City Projekt

“Rose is a rose is a rose is a rose.”

Gertrude Stein, Sacred Emily, 1913

Car is a car is a car is a car.

Taxi is a taxi is a taxi is a taxi.

Taxi is a car is a car is a taxi.

What about taxis in todays digitalized world?

What about taxis in todays digitalized world?

Optimizing city logistics – reducing traffic

Adaptive City Mobility Green City Projekt

Multi Mode: Software based e-fleet

eTAXI

eSHARE

ePool

eKurier

eService

e-. . .

Profit +
> 5-15%

Multi-mode
is
higher utilization
is
less traffic & emissions
is
more turnover

Adaptive City Mobility Green City Projekt

Adaptive City Mobility

Lighthouse project of the German Government

- ✓ Technological innovation
- ✓ Cost-efficiency in e-mobility
- ✓ Reduction of emissions
- ✓ Reduction of traffic

Die Bundesregierung

Gefördert durch:
Bundesministerium für Wirtschaft und Energie
aufgrund eines Beschlusses des Deutschen Bundestages

Adaptive City Mobility Green City Projekt

Innovation 1: e-light vehicles for cities

550 kg

85 km/h max speed

3 Seats

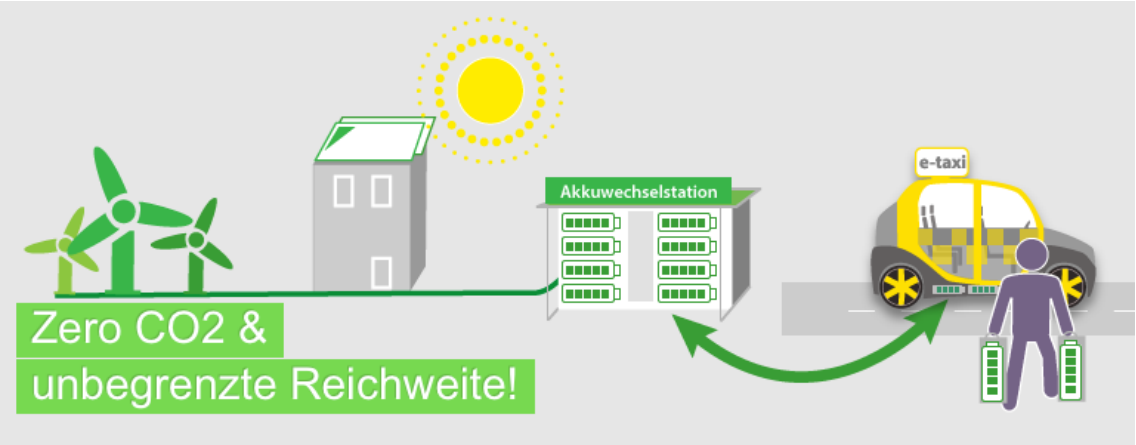
New vehicle classification

L7E

grafics licenced naumann-design

Adaptive City Mobility Green City Projekt

Innovation 2: Manual battery-swapping-system



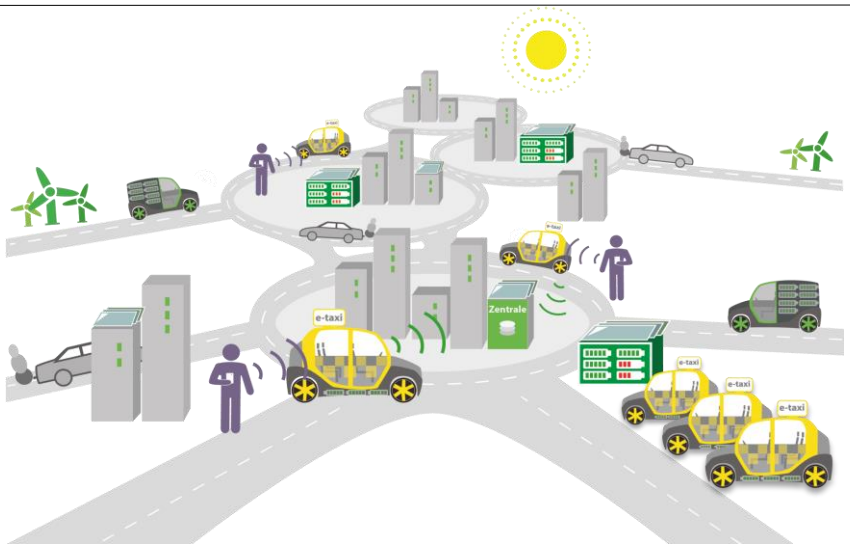
Adaptive City Mobility Green City Projekt

Innovation 2: Manual battery-swapping-system

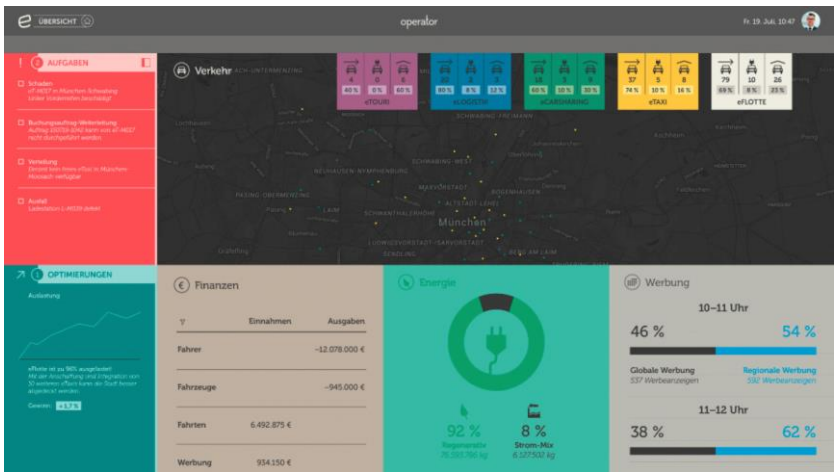
grafics licenced naumann-design

Adaptive City Mobility Green City Projekt

Innovation 3: Intelligent Network through ICT



Operator Surface (fleet managemet, batter changing stations, energy, advertisement…)



Adaptive City Mobility

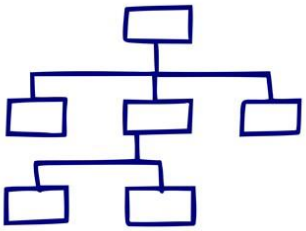
Green City Projekt

End user Apps & Maps

Adaptive City Mobility Green City Projekt

Adaptive City Mobility Green City Projekt

Partner & Team



Partners

SIEMENS BMZ THE INNOVATION GROUP Green City Projekt Die Umwelt-Projekt-Agentur

RWTH AACHEN STREETSCOOTER Weiss Fraunhofer ESK

AMETRAS rentconcept roding EuroDesign embedded technologies GmbH

Adaptive City Mobility Green City Projekt

Design Launch
Juni 2016

Prof. Naumann, Design

Paul Leibold, Initiator

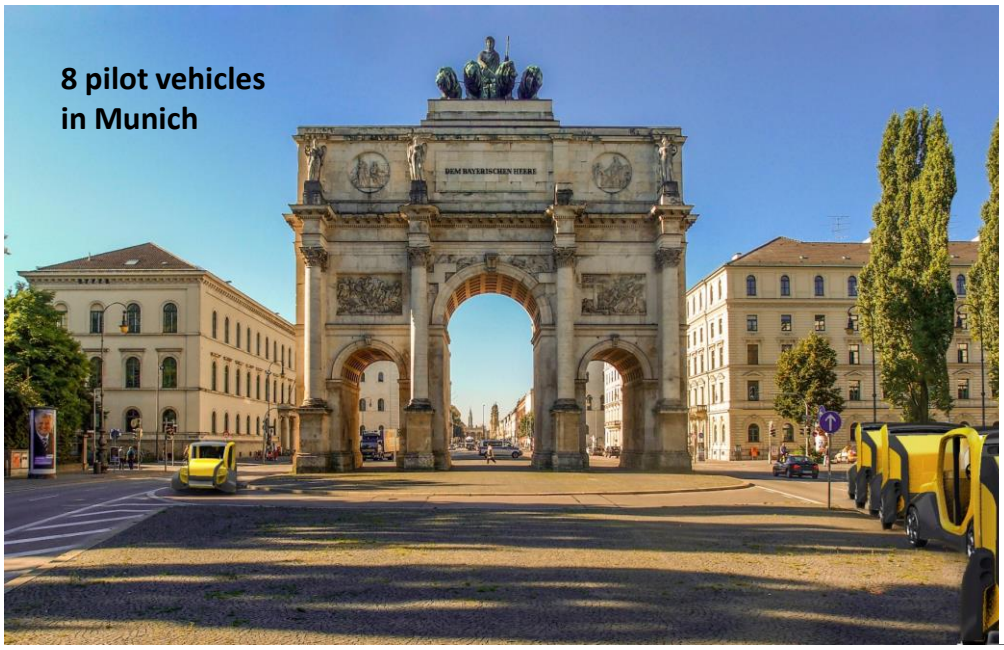
Rauno Fuchs, CEO Green City Projekt

Adaptive City Mobility

Green City Projekt

Next steps…

Field Test in Munich &
Preparation of the industrialization



Adaptive City Mobility
www.adaptive-city-mobility.de

Dr. des. Jessica Le Bris
Tel. (089) 890 668-623
le-bris@greencity-projekt.de

6.6 Annex VI: Key Note Speaker Presentation

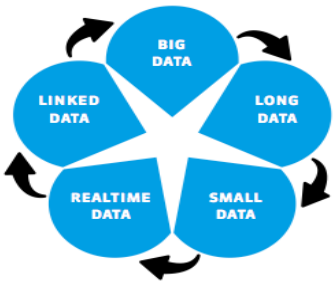
Smart Cities & Logistics

Pieter Ballon
Director Living Labs, iMinds & Professor, Vrije Universiteit Brussel

iMinds Vrije Universiteit Brussel

I. The smart city as utopia

1. The power of real-time data



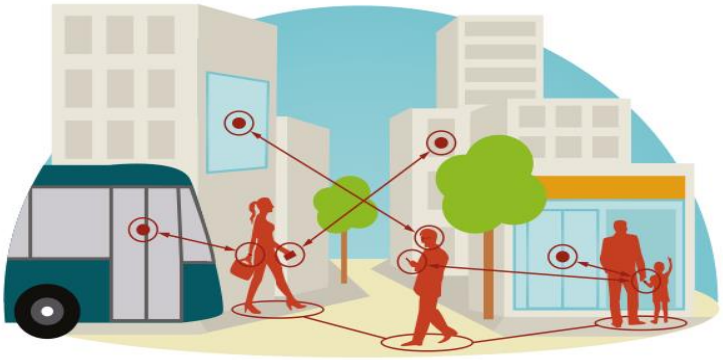
- Collect
- Connect
- Analyse
- Decide
- Measure impact

iMinds Vrije Universiteit Brussel

2. The power of open platforms

iMinds Vrije Universiteit Brussel

3. The power of systemic innovation

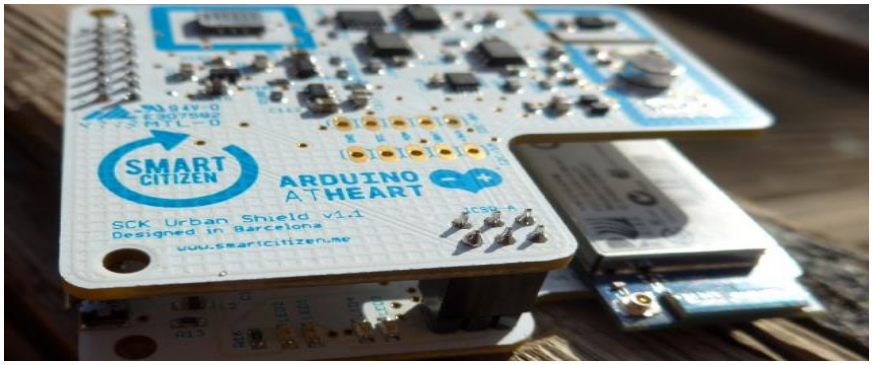


iMinds Vrije Universiteit Brussel

II. The smart city as design choice

iMinds Vrije Universiteit Brussel

iMinds Vrije Universiteit Brussel



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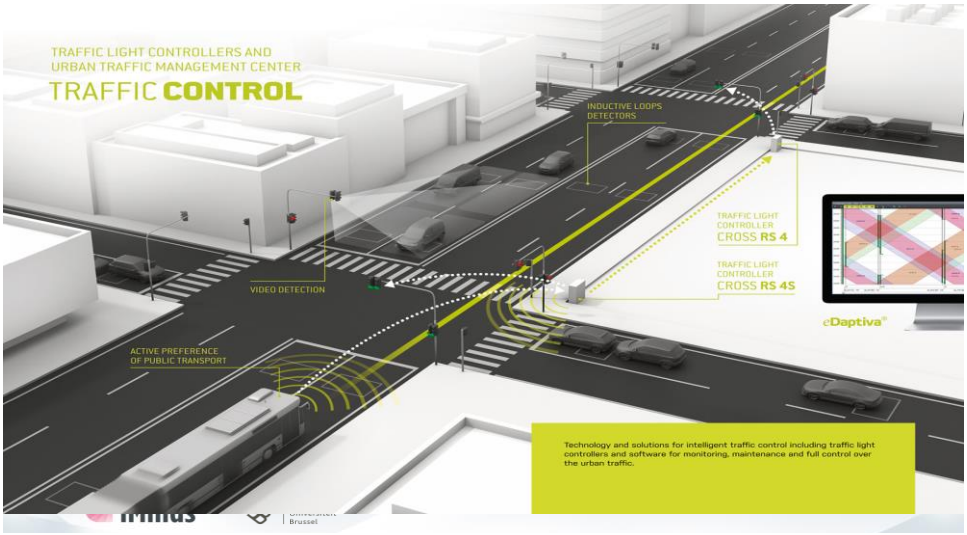
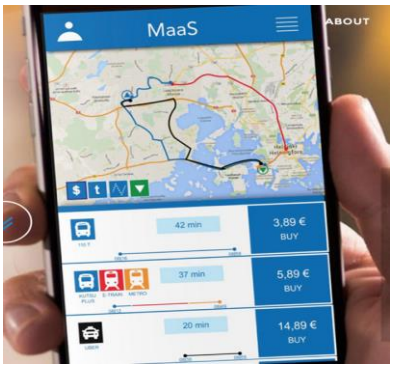
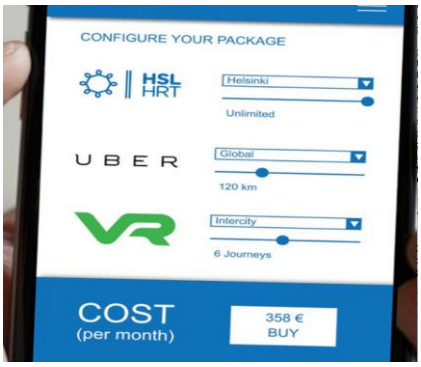
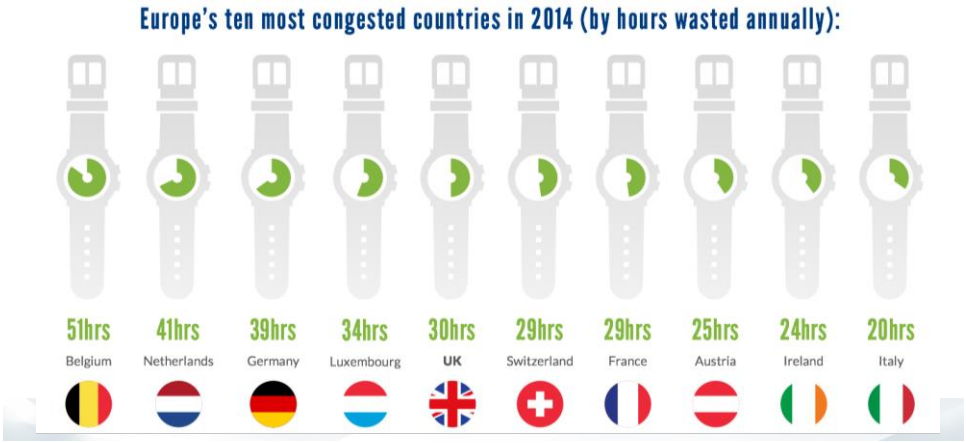




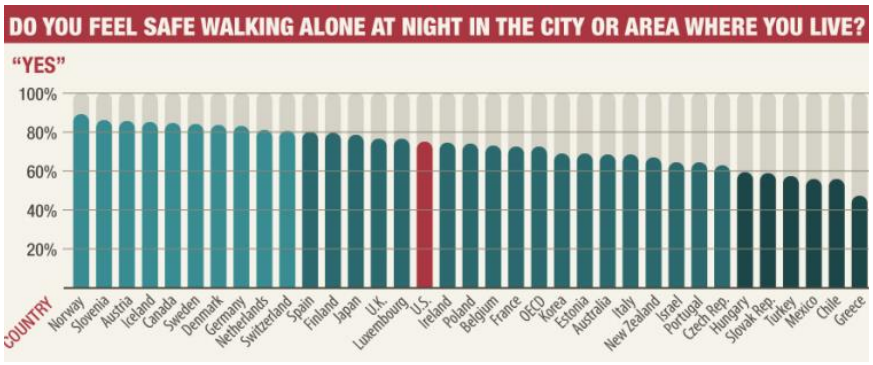


III. The business case for smart cities

Mobility & Logistics



Safety



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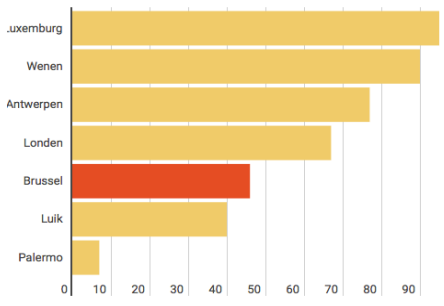
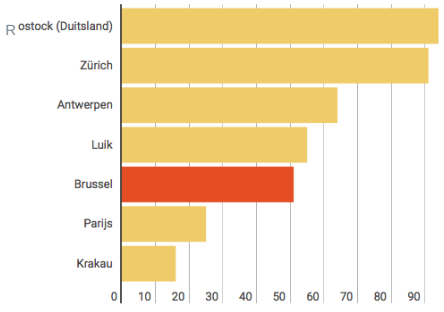
Quality of Life



'Ik ben tevreden over de netheid in mijn stad"



'Ik ben tevreden over de luchtkwaliteit in mijn stad'

iMinds Vrije Universiteit Brussel

Local Economy

'Winkelstraten in kleinere steden ten dode opgeschreven'

08 januari 2016 11:53

door
Henk Dheedene

Corrigeren
Bewaren
Afdrukken

Geef zelf een reactie

Over tien jaar zullen de winkelstraten in de kleinere Vlaamse steden helemaal leeg staan, zegt Luc Van Mol, de topman van kledingketen ZEB. 'Geen enkel plan van de overheid zal die evolutie tegenhouden.'

Door de zachte winter en de opmars van e-commerce happen veel kledingwinkels naar adem. Specialisten waarschuwen voor een golf aan faillissementen in de sector. 'Veel winkels komen aan hun leeftijdsgrens,' zegt ZEB-topman Luc Van Mol in een weekendinterview met De Tijd.

'De eigenaars worden ouder en houden het hoofd recht omdat ze hun pand in eigen bezit hebben. Maar als ze stoppen, vinden ze geen overnemers, want voor jonge mensen wordt het te duur om die panden te huren. De overblijvers moeten elke dag vechten om aantrekkelijk te blijven.'

iMinds Vrije Universiteit Brussel

IV. The smart city as a living lab

Stuurgroep Sint-Andries

iMinds Vrije Universiteit Brussel

4 Dilemmas

1. Infrastructure Dilemma:
   We need public and private investment in platform technologies. But how to roll out platforms without vendor lock-in
2. Information Dilemma:
   Many urban issues are information problems. But information is trapped in silos
3. Innovation Dilemma:
   Smart Cities are a fast moving field. But how to ensure continuous innovation
4. Integration Dilemma:
   Smart Cities can only work if there is buy-in and integration across stakeholders. But how to Sync Technology, Market and Policy Readiness

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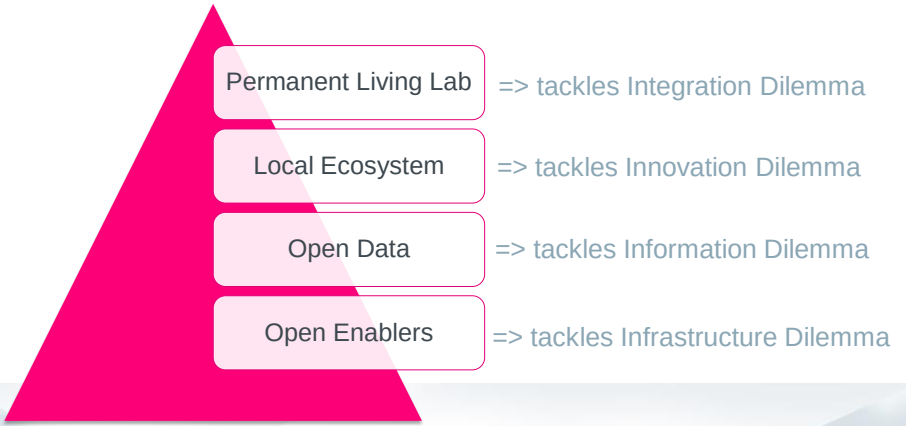
4 Dilemmas tackled

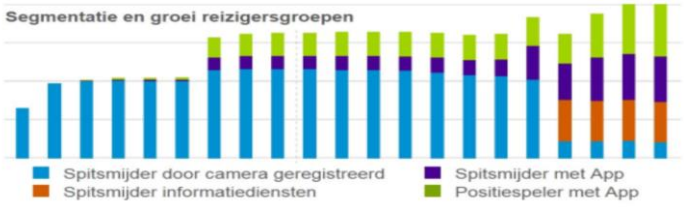


The Power of Living Labs

Hln.be

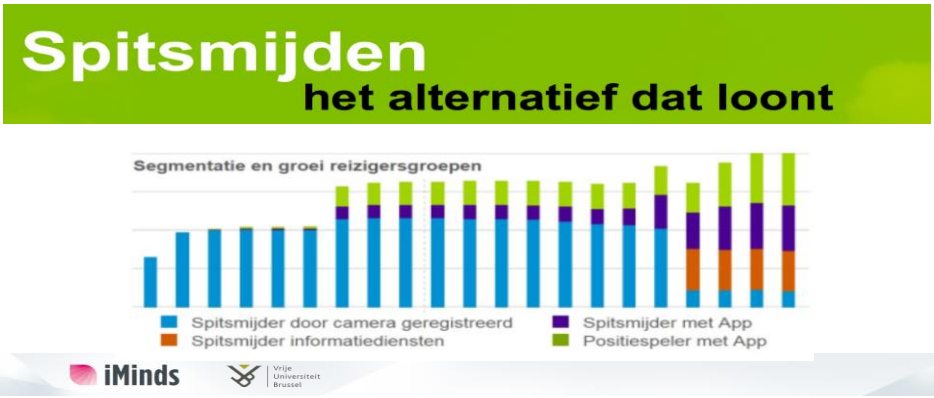
iMinds

The Power of Living Labs



iMinds

The Power of Living Labs



The Power of Living Labs

	Bid		Bid revision
Mean	84.20 EUR	Disabling "special offers and deals"	91.51 EUR
Median	40.00 EUR		50.00 EUR
Mode	30 EUR		50 EUR
Minimum	.0		.0
Maximum	750 EUR		900 EUR

	Bid		Bid revision
Mean	48.00 EUR	Enabling "special offers and deals"	52.10
Median	35.00 EUR		40.00
Mode	50		50
Minimum	1		1
Maximum	250		270

iMinds Vrije Universiteit Brussel

V. Smart Logistics & Living Labs

iMinds Vrije Universiteit Brussel E27.co

Real-time business intelligence

chainstorage.com

Autonomous logistics

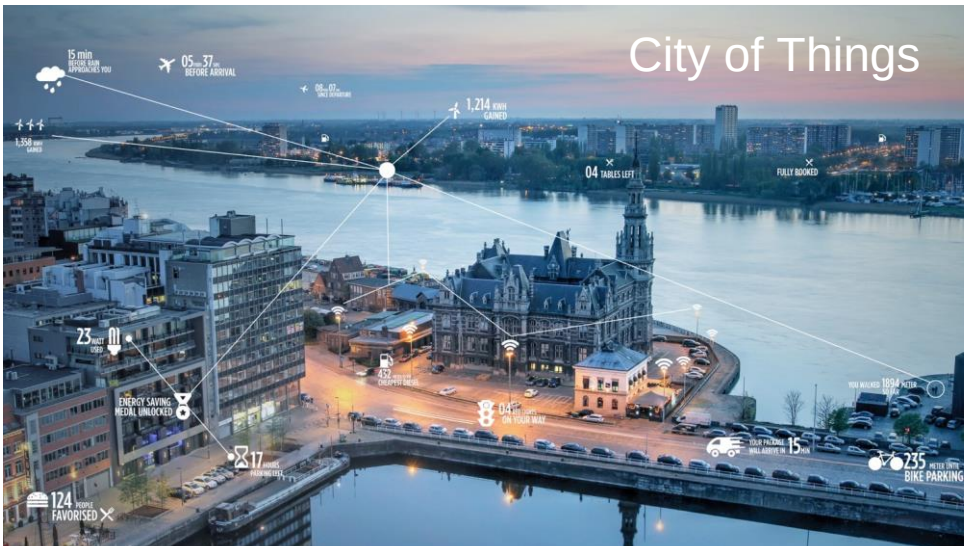
ttnews.com

Security, authentication, integrity

Ironshieldservices.com

Interoperability, usability, processes

iMinds Vrije Universiteit Brussel catkin.eu



Three layers

Business layer
Living lab and analytics infrastructure for evidence-based innovation

Data layer
Providing an open data platform with a real-time view on the city

Network-layer
Deploying a city-wide network connecting multiple wireless technologies

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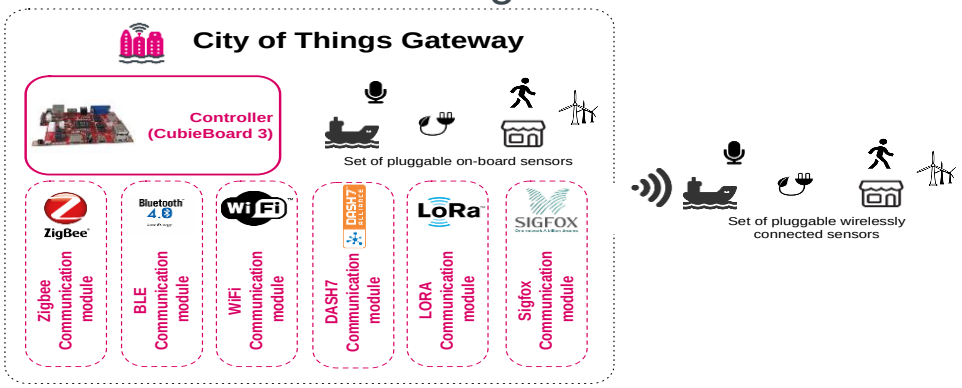
All network technologies



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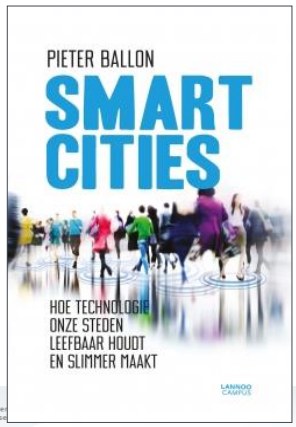
Thanks! – want to know more?



Pieter.Ballon@iminds.be

iMinds Vrije Universiteit Brussel